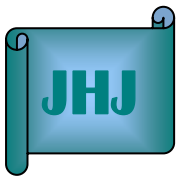

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The Tipping Point of Class Size: When Caring Communications and Relationships Become Possible

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At present Japan's average class sizes in schools are 25% to 30% larger than those for other developed (OECD) countries. Many existing studies point to the possibility of a crucial 'tipping point' for the number of students in classes. Below this point, teachers can get to know students well enough to have caring and supportive relationships which would in turn possibly reduce bullying and school violence. There are also reports of increasing work hours and mental and physical illnesses among teachers. Smaller class size would not solve all these problems, but it could well be a major part of the problem. It may be that the class size of 20-25 is the 'tipping point' that allows teachers to have quality teaching relationships with their students through better communication. Communicative language learning and teaching, more than other academic areas, bases itself on healthy relationships between classmates and teachers and good group dynamics for successful outcomes. While reducing class size may be initially costly, it should be seen as cutting the enormous cost of subsequent social problems due partly to unhealthy school environments.

現在、日本の学校における学級人数は他の先進諸国（OECD 諸国）に比べて 25%から 30%程多い。多くの研究が、学級人数の決め手となる臨界点（Tipping Point）の存在について示唆をしている。教師が生徒のことをよく知り、充分に配慮・支援をすることが可能な学級人数を設定することは、いじめや学内暴力の減少にもつながるであろう。一方で、教師の労働時間数の増加や精神的・身体的疾患の増加に関する報告も見られる。少人数学級がこれらの問題を全て解決するわけではないが、学級人数がそうした諸問題の主要な要因である可能性は高い。20 人から 25 人という学級人数は、よりよいコミュニケーションに基づく、教師・生徒間の質の高い人間関係構築を可能にするための臨界点（Tipping Point）なのではないであろうか。コミュニカティブな言語学習および言語教育が成功を収めるためには、他のどの学問分野よりも、その基盤として、生徒同士の、あるいは教師・生徒間の健全な人間関係と健全なグループ・ダイナミックが不可欠である。一学級あたりの生徒数を減らすことは最初のうちこそ高コストに感じられるかもしれないが、結果として、不健全な学校環境に起因する社会問題という膨大なコストの削減につながる、という視点が必要であろう。

Introduction

"I have 40 students and I am not coping well. It is hard to manage them, to motivate them, to even know them."

These are the words of an English teacher who attended a workshop for junior and senior high school teachers in December 2006 organized by the second author. Being asked what their main concerns were at work, many of the 12 participants mentioned class size. One clear exception was a teacher who said:

"I teach in a commercial high school and we have a lot of money so we have classes of only 20 students. I am enjoying my teaching."

Japan and Korea are the only nations among the 25 OECD (Organisation for Economic Co-operation and Development) members which go far beyond the OECD norm of 22 students per class for primary schools (Japan is at 28.8 about 25% more students) and 24 for lower secondary schools (Japan has 34.3, about 30% more students) (MEXT, 2005a, p.:23). This does not mean, of course, that the class sizes in Japan and Korea are among the largest in the world. Among the non-OECD countries, the average for China, for instance, is 34.4 for primary and 57.1 for lower secondary schools; the figures for India are 40.0 and 39.0, respectively. Among the 25 highly industrialized nations, however, teachers in Japan and Korea face the largest number of students. In other words, the average class size of Japanese primary schools is equivalent of that of Jordan, and lower secondary, Brazil, if we look outside the OECD membership (UNESCO, 2005, Table 2.9). Clearly, if a lower number of students per class is a desirable goal, Japan's economic power has not been adequately reflected in one of the most basic conditions of teaching and learning at school.

The average of 34.4 for junior high school means that the size is even greater for some classes. The capped class size for public schools is 40 for primary and lower secondary schools, and 40 is considered 'standard' for upper secondary school. However, local

governments have some discretion over the class size. The governor of Yamagata prefecture, for instance, promised during the election campaign that he would reduce the class size to 30 for grades 1 to 12 "even if it would cost a bridge or two" and he kept the promise (Yoshida, 2006). Most local governments have implemented various measures to reduce the class size.

Tipping Point

"This possibility of sudden change is at the center of the idea of the "tipping point" and might well be the hardest of all to accept…. The tipping point is the moment of critical mass, the threshold, the boiling point" (Gladwell, 2000, p.12). Being teachers, we are interested in the tipping point of class size where various difficulties related to a critical mass of students seem to vanish to be replaced by better conditions for learning and teaching. In reality, however, tipping points vary, depending upon such factors as the level of students (e.g., grades 1-15), subjects, teacher's ability and experience, mode of teaching (e.g. lecture style, small group), curriculum, student ability and attitudes, and the school climate (e.g., the levels of cooperation among teachers, regimentation and control at school). Most teachers recognize that when students get to know each other enough to form supportive relationships, they can more easily enhance each other's learning through the improved group dynamics. When students are too numerous for this to happen easily, they may not easily identify with the class, invest in the learning, and wish to even attend, seeing themselves as just a number, or "brick in the wall."

Learning that uses relationship-based communication as its primary means of acquisition, as communicative language teaching (CLT) does, may be especially sensitive to this tipping point. However, we invite our language teacher readers to look beyond their own subject field for the remainder of this article and acknowledge that what is good for education as a whole may be especially good for foreign language education and that when students are nurtured more carefully in other classes, it has an

impact on the individuals in language classes as well. Class size is crucial for allowing healthy relationships and communications to shape healthy minds. When students are healthier emotionally due to caring relationships with teachers and classmates, it is easier to facilitate learning for all. Research seems to be showing us a tipping point in student numbers below which these caring relationships appear to happen. We contend that not only will we have better classes with fewer students, but smaller classes help to make students more well-adjusted, communicative, and collaborative throughout their lives.

The argument for class size goes far beyond our language-teaching field but it is a crucial one for our students and ourselves. In the US, landmark research in Tennessee in the 1990s (Finn & Achilles, 1999) showed the impact that smaller classes had on student achievement with Finn concluding that, "this research leaves no doubt that small classes have an advantage over larger classes in school performance in the early primary grades" (USDOE 1999). An earlier study (Wenglinsky, 1997) found that, "[a]t the eighth-grade level, lower student/teacher ratios improve the school social environment, which in turn leads to higher achievement" (USDOE, 1999). Another Reducing Class Size project in Wisconsin found that "[t]eachers say they know their students better, know where each child is in the learning process, and can provide more individualized instruction. All of these improvements in teaching are matched by increased student achievement, making teaching more rewarding" (USDOE, 1999).

Finally in the "summary of research conclusions" the US Department of Education states that:

> The research data from the relevant studies indicate that if class size is reduced from substantially more than 20 students per class to below 20 students, the related increase in student achievement moves the average student from the 50th percentile up to somewhere above the 60th percentile. For disadvantaged and minority students

the effects are somewhat larger.

Students, teachers, and parents all report positive effects from the impact of class size reductions on the quality of classroom activity (USDOE, 1999).

NIER Data about Japan

We contend that the tipping points vary also depending upon what aspect of class is examined in relation to the class size. The key question usually asked in relation to class size has been whether smaller class size can improve learning. The results of existing research on this question are somewhat mixed. Some studies have produced results which support the hypothesis, i.e., the smaller the class the greater the educational benefit, with the class size of 20 (or below) as a benchmark (Finn & Achilles, 1999), whereas others reported that small class size *per se*, i.e., when it is not combined with different mode of teaching and learning, has no bearing upon student learning (Hoxby, 2000). In Japan, a very comprehensive study by NIER (The National Institute for Educational Policy Research) did not support the hypothesis either (NIER, 2001).

The NIER study, however, did produce results that we consider are more significant than the direct effect of class size upon student academic performance. They have to do with classroom climate, peer relations and student-teacher relations. These constitute essential conditions for the well-being of students and teachers, which in turn are crucial for effective learning and teaching. They are especially important where one hopes for learning through communicative interaction, as in CLT. The results of the NIER study regarding junior high school students and their classes are introduced below (number of classes = 170).

(1) The class size of 25 is the upper threshold for students to feel the improvement in the classroom climate. For instance, students in small classes (fewer than 20) were more

inclined to feel that their class was enjoyable ("*tanoshii*") and that things were done with care ("*teinei*"), than classes with more than 21 students. Students in classes with numbers under 25 described their class as more "serious/studious (*majime*)," "relaxed (*nobinobishita*)," "warm (*atatakai*)," and "likable (*sukina*)" than students in classes with 26 students and over (NIER 2001, p. 85-87).

(2) Students in smaller classes tend to have more positive perceptions of peer relationships than students in larger classes. For instance, students in smaller classes (less than 25) reported to a greater extent than students in larger classes (more than 36) that "when a classmate is in trouble, someone comes up to help the person", and the difference between the two groups was statistically significant. Conversely, the larger the class size, the more students experienced the following:

- to see conflict and bullying among classmates
- to see classmates laughed at or sneered at when they have made mistakes
- to be unable to focus on study because of classmates (NIER 2001, p. 89-91).

(3) There is a qualitative difference in the experience of student-teacher relationships between students in a class less than 20 and others in a larger class (21 and over). Students in a class smaller than 20 agreed to the following statements to a greater extent than students in classes with 21 students or over.

"I felt that my teacher

- knew me well."
- understood my family situation well."
- knew when I had difficulties with study."
- listened to me with ease and was willing to be consulted."
- understood my thoughts and deeds well."
- cared about me."

The implications of these findings are many. First, they suggest that for the class size to make a positive emotional difference in classroom climate, peer relations, and student-teacher relations, it has to be kept within the range of 20-25, with 25 being the maximum. This may explain, at least in part, why the gradual reduction of class size, due mainly to demographics, in the past 50-odd years, from 45 in 1950 to 31 in 2004 at the junior high school level (MEXT 2005a, p. 23) does not seem to have contributed to reducing such problems as bullying and school non-attendance, as a by-product of bullying (Yoneyama, 1999). It is likely that the class size is still too large to generate positive and remedial effects. It has simply not reached the threshold, the 'tipping point.'

Secondly, these findings provide a missing link between Japan's relatively large class size among the OECD countries on the one hand, and the OECD data (PISA: Programme for International Student Assessment) on student perceptions of their relationship with teachers, on the other. As Table 1 indicates, Japanese students perceive their relationship with teachers to be less positive, when compared with the OECD average for all items concerned. For instance, only 44.5% of the 15-year-olds surveyed in Japan felt that most of their teachers were "interested in students' well-being", which is nearly 22% less than the OECD average of 66.3%. The NIER study on class size suggests the possibility that this could partly be due to the large class size in Japanese schools. This in turn suggests that student-teacher relations may be improved by reducing the class size.

Table 1 Student responses to questions on student-teacher relations in the PISA 2003 (Variables ST26Q01 to ST26Q05)

Thinking about teachers at your school: To what extent do you agree with the following statements?	Japan or OECD average	Positive response (1)+ (2) %	Strongly agree (1) %	Agree (2) %	Disagree (3) %	Strongly disagree (4) %	Missing (8) %	Total %
Students get along well with most teachers	Japan	63.8	7.7	56.1	29.2	6.8	0.3	100
	OECD	69.8	9.7	60.1	23.8	5.0	1.4	100
Most teachers are interested in students' Well-being	Japan	44.5	5.1	39.4	43.2	11.4	0.9	100
	OECD	66.3	9.7	56.6	26.1	5.5	2.0	100
Most of my teachers really listen to what I have to say	Japan	53.3	4.5	48.8	36.7	9.2	0.8	100
	OECD	63.3	9.3	54.0	28.7	5.8	2.3	100
If I need extra help, I will receive it from my teachers	Japan	57.0	7.4	49.6	33.1	9.0	0.8	100
	OECD	74.5	14.4	60.1	18.9	4.4	2.2	100
Most of my teachers treat me fairly	Japan	66.4	7.8	58.6	24.4	8.4	0.8	100
	OECD	75.1	13.1	62.0	17.6	5.1	2.3	100

Consider a class where there are only 20 students. A teacher is able to talk individually to the students more often and get to know them better – their personality, and their individual needs both academic and personal. The extra amount of attention can create strong, affective relationships that nurture students. In therapy, Hubble et al. (1999) contend that approximately 30% of all healing is actually due to the relationship with therapists. We would suggest that the same is true about students' relationships with their teachers; i.e., when there is a good rapport with teachers, students are more motivated, open to learning, and open to relationships with other students. As Carl Rogers (1980) asserted, "What is true in a relationship between therapist and client may

well be true for a marriage, a family, a school, an administration, a relationship between cultures or countries" (p. xvi).

This is in clear contrast with teachers in classes of 40 students who are simply overwhelmed by the feeling that it is beyond a manageable number. The major concern of the teacher becomes keeping order in the classroom, not teaching. The teacher is not able to give students quality time. Getting to know and nurture young minds becomes a distant idealistic dream.

Thirdly, the findings of NIER study suggest that the benefit of having a small class of around 20 is far greater than the way class size has hitherto been framed: either as a means to improve academic outcome, or as a matter of improving teachers' work conditions. Instead, these results suggest that the possibility that smaller class can be the key to create conditions for learning and teaching - positive classroom climate and positive human relations among teachers and students - which are hard to measure but essential for maintaining the basic sense of safety, security and well-being both for students and teachers. In fact, the findings suggest the importance of understanding learning and teaching with a holistic view, not just a matter of pedagogy, curriculum, and measurable academic outcome, but as a complex experience where various aspects of school life are intricately connected to each other through emotions and human relations.

For instance, bullying tends to be understood as a behavioral problem and usually discussed as if it has nothing to do with learning. However, bullying can be a serious deterrent to learning not only for the victim but for other students in the class. This is well expressed by a student who was in the class of a 12-year-old girl who committed *ijime*- (bullying) suicide in Takigawa, Hokkaido in 2005. She told a relative of the girl, "I wanted to include her in the group, but that would make me the new target. Just the

thought made me tremble with fear and *studying was out of the question*" (Asahi Shimbun, 2006, emphasis added). A school described as a "battle field" by students is unlikely to constitute a good learning environment (Yoneyama, 1999, p. 248). The findings of the NIER study discussed above suggests the possibility for improving the quality of human relations – including teachers and students – by reducing the class size to 20-25, with the view to increase the chance for learning and teaching to occur in a more relaxed and less threatening environment.

Overworked Teachers: A Contributing Factor

There is also ample evidence to show that teachers in Japan are overworked to the verge of physical and mental breakdown. According to a study, male teachers at junior high schools (N=148) worked 56 hours per month outside the normal work hours, and close to half of all teachers surveyed (N=2,452) reported poor health conditions (KKCI, 2006). Another study reports that the average after-hour work amounted to over 80 hours per month for teachers of primary and secondary schools (N=1,006), where 80 hours is the official level of *karoshi* (death by overwork) as determined by the Ministry of Health, Labor and Welfare (ZKK, 2005). The number of teachers who took sick leave has been increasing steadily, especially in relation to mental health problems, which accounted for almost 60 percent of all the sick leave in 2005 (MEXT, 2006). The point here is that this is bad news not only for teachers, but also for students, since unhappy teachers are more likely to produce unhappy students, and vice versa. If teacher work can be cut by reducing class size and if smaller classes improve classroom climate and human relations, the domino-effect of reducing class sizes may go well beyond the agendas of eager parents and teachers' unions.

Conclusion

What the NIER findings suggest, after all, is the likelihood that small classes of 20-25 can provide the basis for building a caring community for both students and teachers, where learning and teaching occur on the basis of positive human relations. The demand on teachers to understand students' family situations will increase, and schools will be under greater pressure to perform higher levels of care.

Research and common sense suggest that smaller classes will give teachers more time to communicate and build relationships with their students and more time to learn about them and motivate them to learn. We see this as especially apt for foreign language learning when MEXT states that one of its primary goals is to cultivate "Japanese with English abilities." Smaller class sizes will not magically be sufficient to improve all students' learning, provide positive socialization, and lessen the stress of teachers. But we think it will be a necessary condition. It may be that the class size of 20-25 is the 'tipping point' that empowers teachers to be caregivers as well as teachers. And to have caring relationships seems to be what contemporary students are most in need of. Surely, it will be expensive, but for Japan, the second largest economy in the world, it should be a small cost to build a better future for the next generation and beyond.

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