

# 立法會 *Legislative Council*

LC Paper No. CB(2)1484/09-10(07)

Ref : CB2/PL/ED

## **Panel on Education**

### **Updated background brief prepared by the Legislative Council Secretariat for the meeting on 13 May 2010**

#### **Small class teaching**

#### **Purpose**

This paper summarizes the discussions of the Panel on Education ("the Panel") on issues relating to small class teaching ("SCT") in primary and secondary schools.

#### **Background**

2. In the 2003-2004 school year, the Administration launched a pilot study on effective strategies of class and group teaching in primary schools ("the Study") to identify the good practices in small class and variable group teaching in selected public sector primary schools for dissemination to and adaptation by other schools for enhancing learning effectiveness. At stage one, a survey was conducted on existing good practices of effective small and variable group teaching strategies adopted in schools. In the light of the findings in the first stage of the Study, the Administration re-focused the second stage to try out SCT in some selected schools. Participating schools were given additional time-limited resources to operate from the 2004-2005 school year small classes of about 25 students, starting at Primary 1 ("P1") and then proceeding to P2 for two consecutive cohorts. The students would return to regular classes at P3. The two cohorts of students were followed up longitudinally beyond P2 to see whether the benefits of SCT at P1 and P2 could be sustained as they moved up to higher levels, and whether they would compare favourably in terms of their affective and academic domains with students of similar background in other schools not participating in the Study. The second stage of the Study lasted for four years until the end of 2008.

3. On 9 September 2007, the Secretary for Education announced the reduction of the standard size of conventional class in primary schools from 37 to 35 and of activity approach class from 32 to 30 with effect from the 2008-2009 school year. In his 2007-2008 Policy Address, the Chief Executive further announced that

starting from the 2009-2010 school year, SCT would be implemented in P1 in public sector primary schools and extended to higher levels progressively up to P6 in the 2014-2015 school year along the following direction -

- (a) for school nets with sufficient number of school places to meet demand, each school in the net could decide whether or not to implement SCT, i.e. using 25 students per class as the basis for school places allocation. Schools not opting for SCT would continue to be allocated students on the basis of 30 students per class; and
- (b) for school nets which might feature a shortfall of school places, the Administration would first invite each school in the net to indicate whether it wished to implement SCT. If there remained a projected shortfall of school places after taking into consideration the intention of all schools in the net, the Administration would explore ways to resolve the problem, such as by borrowing places from neighbouring school nets and examining the feasibility of building new schools. If schools in the net could not implement SCT from the 2009-2010 school year due to practical constraints, the Administration would separately consider ways to assist these schools in taking forward school-based measures.

### **Deliberations of the Panel**

4. The Panel discussed issues relating to SCT at a number of meetings. The major concerns of the Panel are summarized below.

#### Interim findings of the Study

5. The Administration and Professor Galton of the University of Cambridge, the consultant commissioned to carry out the Study, briefed the Panel on the interim findings of the Study at its meeting on 12 February 2007. The interim findings of the Study and the preliminary analysis are in **Appendix I**.

6. Members questioned the validity of the observation that there was insufficient evidence to demonstrate that students in small classes fared better than their counterparts in regular classes in terms of academic performance, subject attitudes and motivation. Members pointed out that this observation was at variance with the experience shared by the schools participating in the Study. Members urged the Administration to release the interim report of the Study to facilitate their understanding of its design and methodologies.

7. The Administration stressed that the findings and observations of the Study were preliminary, and it had no intention to undermine the benefits of SCT through the preliminary findings. In order to maintain the independence of the Study and

avoid unnecessary disturbances to the participating schools, the Education Bureau ("EDB") had all along adopted the practice of not disclosing the interim findings of research studies in progress. EDB would release the findings of the final report of the Study after its completion.

#### Transition period

8. Following the announcement of the decision to implement SCT in public sector primary schools, the Panel invited the Administration to brief members of the implementation details. Members noted that as at February 2008, 323 (or 70%) of 463 public sector primary schools participating in the cycle of the Primary One Admission System had opted for SCT with effect from the P1 cohort in the 2009-2010 school year. From March to June 2008, the Administration conducted an assessment on the demand and supply of school places in the 36 school nets to ascertain the adequacy of supply to meet projected demand for a six-year period from 2009-2010 to 2014-2015. Based on the projections, 297 (or 92%) of the 323 schools would start to implement SCT from the 2009-2010 school year as there was no projected shortfall of school places in their respective school nets or the projected shortfall was considered relatively insignificant<sup>1</sup>. Additional resources would be provided to those schools which were prepared to implement SCT but could not do so due to a projected shortfall in school places for the school nets concerned. Additional resources would also be provided to all schools maintaining 30 students per class, provided that the schools had drawn up concrete plans for improving teaching and learning.

9. Members considered that a transition period should be set after which all public sector primary schools should implement SCT. Members opined that the shortfall of school places was transient as the student population of the primary sector fluctuated from year to year. The Administration should consider implementing short-term measures such as borrowing school places from adjacent school nets before building new schools. Some members were of the view that the provision of additional resources for schools maintaining 30 students per class should cease after the transition period.

10. The Administration explained that the policy direction was to promote and not to mandate the implementation of SCT. Schools should be given the flexibility to decide whether to adopt SCT having regard to the practical circumstances such as the availability of classrooms, the number of trained teachers as well as the wishes and needs of schools, parents and students. The Administration considered it inappropriate to set a target date by which all public sector primary schools were required to implement SCT. The progress of implementation would depend on schools' preference and readiness to operate small classes and the feasibility of implementing SCT in individual school nets. The

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<sup>1</sup> As at December 2009, a total of 301 or 65% of the public sector primary schools had implemented SCT in the 2009-2010 school year.

Administration planned to conduct an assessment of the supply of and demand for school places in each school net for a six-year period with the first planning cycle from the 2009-2010 to 2014-2015 school years. In March every year, the Administration would invite schools which had yet to implement SCT to indicate their proposed implementation year to facilitate planning. For school nets with anticipated shortage of classes during the six-year period, the Administration would consider short-term measures. In case of sustained shortage, the Administration would consider plans for school building and/or revisions to the delineation among school nets.

11. According to the latest information, with the completion of the second planning cycle (i.e. from the 2010-2011 to 2015-2016 school years), the number of schools which would implement SCT would increase to 318 (69%) in the 2010-2011 school year.

#### Standard class size

12. Some members considered that the standard class size of 25 should be further reduced to maximize the benefits of implementing SCT, and urged the Administration to review whether this was an ideal class size for primary education.

13. In the Administration's view, the standard class size of 25 was an appropriate number and compared favourably with the average class size for public sector primary schools in Australia, Japan and the United Kingdom. There would be significant resources implications and practical constraints to further reduce the standard class size as the Administration had to tackle infrastructural constraints in certain school nets for implementing SCT in primary schools at 25 students per class.

#### SCT in secondary schools

14. Noting the absence of a timetable for implementing SCT in secondary schools, members urged the Administration to give a concrete timetable. A suggestion was made to reduce the class size of secondary schools by two students per year starting from the 2008-2009 school year so that the cohorts of students receiving SCT in primary schools could proceed to secondary schools with small class size after completing their primary education in the 2014-2015 school year.

15. The Administration advised that a decision had yet to be made for SCT in secondary schools. Given the significant financial implications, the Administration had decided to implement SCT in primary education first. As SCT in primary schools and the new senior secondary academic structure would be implemented from the same school year (i.e. 2009-2010 school year), the Administration would concentrate its work on the preparation and arrangements for these two initiatives in the next few years. Nevertheless, the Administration had agreed that the basis for calculating the approved Secondary 1 classes for schools

with surplus teacher(s) as a result of the September headcount would be reduced gradually from 35 students per class to 30 as from the 2009-2010 school year.

### SCT in special schools

16. Members expressed concern about the class size of special schools. Noting that special schools for mildly and moderately mentally handicapped children were operating on the basis of 20 students per class, members urged the Administration to review and reduce the class size of special schools to improve their teaching and learning environment.

17. The Administration pointed out that different types of special schools had already been operating in small classes ranging from 8 to 20 students per class. Such class sizes had been set with reference to the circumstances of students in different types of special schools. A review on the class sizes of different categories of special schools was underway, and the Administration would report the outcome of the review to the Panel.

### Professional development of teachers

18. Members expressed concern about the plans for professional development of teachers for implementation of SCT. According to the Administration, it had started initial discussions with the teacher training institutions on necessary professional development programmes to be offered for pre-service and in-service teachers. The training courses would aim at enhancing teachers' capabilities to make use of the small class environment to enhance teaching and learning. Theme-based workshops and seminars would also be organized. Furthermore, schools experienced in SCT would be identified as seed schools for the provision of support to other schools in the form of experience sharing. The Administration would make reference to the findings of the SCT Study and the recommendations of the consultant before finalizing the professional development plans.

### **Latest development**

19. The Administration released the final Report of the Study in January 2010. The full Report was uploaded onto the EDB homepage and also placed in the Central Resources Centre at Kowloon Tong Education Services Centre for public reference. A gist of the relevant findings of the Study on effective teaching strategies and modes of support as well as the corresponding professional development programmes in 2008-2009 to support teachers to maximize the benefits of SCT are in **Appendices II** and **III** respectively.

**Relevant papers**

20. A list of the relevant papers on the Legislative Council website is in **Appendix IV**.

Council Business Division 2  
Legislative Council Secretariat  
7 May 2010

### **Interim findings of the pilot study on effective strategies of class and group teaching in primary schools**

Based on the first two years' data and observations, Professor Galton provided the following preliminary analysis:

- (a) there was insufficient evidence to demonstrate that pupils in small classes fared better than their counterparts in regular classes in terms of academic performance, subject attitudes and motivation;
- (b) attempts were made to break down each attainment test into a number of 'generic skills' such as critical thinking, problem solving and creativity. Results regarding the impact of SCT on promoting these generic skills were not conclusive;
- (c) analyses of five schools with large numbers of disadvantaged pupils against the remainder showed that disadvantaged pupils did better under SCT in Chinese and Mathematics for Cohort 2, but this advantage was not replicated for Cohort 1. Cohort 1 were pupils studying in small class from P1 to P3 and would return to regular class in P4 in the 2007-2008 school year, and Cohort 2 were pupils studying in small class from P1 to P2 and would return to regular class in P3 in the 2007-2008 school year;
- (d) systematic classroom observations revealed signs, particularly among teachers of Chinese and Mathematics, that participant teachers were changing their practice in ways that resulted in higher levels of problem-solving questioning and a greater range of feedback responses, although, overall, there was little evidence of a dramatic change in teaching modes;
- (e) although it was widely believed that more individual attention could be given to pupils in a small class context, systematic lesson observation data showed low levels of individual attention provided by teachers for pupils in the small classes; and
- (f) the case studies observed that schools and teachers had not yet reached the stage where they were willing to take ownership for revising the curriculum in ways which maximized the advantages of having fewer pupils in the class.

Source : The above information was provided by Professor Galton of the University of Cambridge at the meeting of the Panel on Education on 12 February 2007.

### **The gist of relevant findings of the Study on effective teaching strategies and modes of support necessary for maximizing the benefits of small class teaching**

- To support teachers to implement small class teaching to enhance learning effectiveness, the professional development programmes of teachers should be framed around the six broad principles of (i) setting clear learning objectives, (ii) using extended questioning techniques, (iii) increasing pupil participation, (iv) using group and pair work, (v) providing appropriate feedback and (vi) creating a framework for assessment.
- It is crucial to promote teaching for understanding by increased pupil talk and participation through extended whole class discussion, together with the increased use of pair and group work, thus easing the transition from the current emphasis on whole class instruction where pupils spend most of their time watching or listening to the teacher. These initiatives should concentrate initially on improving the quality of questioning during whole class discussion and with the effective use of peer tutoring during pair work where more knowledgeable pupils are able to help slower learners, thereby allowing teachers to provide more individual attention. When the use of more effective whole class teaching strategies have begun to take root, collaborative group work could be implemented.
- In coping with diversity, aspects of class organization and pedagogy to bring about improvement in pupils' attainment should be in place. These include the development of flexible grouping strategies so that teachers can sometimes concentrate on slower learners while the more advanced work independently, the use of peer tutoring and the creation of resources which relate as far as possible to the pupils' daily lives. The biggest improvement would come about, however, if teachers could raise the expectations of pupils and convince them that it is often lack of effort rather than ability which stops them from making progress.
- The approach of 'Learning Circles' should be promoted for both inter-school sharing across subjects and intra-school sharing of pedagogical issues, which focuses at any one time on a specific pedagogy, allows teachers to observe and evaluate each other's classroom practice and thereby enhances the participants' professionalism.

**Corresponding professional development programmes in 2008-2009 to support teachers to maximize the benefits of small class teaching**

<b>Time of Delivery</b>	<b>Professional Training and Support Activities</b>
April 2008	School-based workshops on “Co-operative Learning”
April – June 2008	Learning Circles for collaborative lesson planning formed to support teachers to plan lessons together, observe lessons at each other’s schools and review their practices
May 2008	Seminar on Small Class Teaching in Shanghai by education practitioners from Shanghai
July 2008	Sharing sessions on planning for small class teaching by school heads and teachers with experience in small class teaching
September 2008 – August 2009	School networking for regular professional support and sharing of experiences and resources
October 2008	Seminars on objectives and implementation strategies of small class teaching by Education Bureau (EDB) officers
December 2008 – June 2009	Learning Circles for Chinese Language, English Language and Mathematics teachers to attend periodical workshops as well as to meet once a month to observe lessons at each other’s schools, followed by review discussions facilitated by the school support team of EDB
December 2008 and April 2009	Study tour to Shanghai to conduct school visits to observe effective teaching pedagogies in small classes through lesson observations, and to share views and experience with Shanghai experts and front-line education workers on implementation strategies and support measures as well as other contextual factors contributing to the smooth implementation of small class teaching
December 2008 – June 2009	Sharing sessions with the teacher education institutes on the findings of the Study with a view to reinforcing their teacher training programmes and in-service courses under planning
March – May 2009	Workshops on effective strategies to maximize the benefits of small class teaching for Chinese Language, English Language, Mathematics and General Studies teachers
May 2009 onwards	In-service training courses for teachers with provision of supply teachers as appropriate to roll out and spread over a period of six years
October – November 2009	Workshops on effective strategies to maximise the benefits of small class teaching for Chinese Language, English Language and Mathematics teachers

Source : Extracted from Annex to LC Paper No. CB(2)645/09-10(01) provided by Education Bureau in December 2009.

**Relevant papers on small class teaching**

<b>Meeting</b>	<b>Date of meeting</b>	<b>Paper</b>
Legislative Council	15.7.1998	<a href="#">Official Record of Proceedings, Question 6 (Question)</a>
Legislative Council	30.9.1998	<a href="#">Official Record of Proceedings, Question 20 (Question)</a>
Legislative Council	14.10.1998	<a href="#">Official Record of Proceedings, Question 20 (Question)</a>
Panel on Education	18.1.1999 (Item III)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Legislative Council	19.12.2001	<a href="#">Official Record of Proceedings Pages 63 - 67 (Question)</a>
Legislative Council	3.7.2002	<a href="#">Official Record of Proceedings Pages 69 - 77 (Question)</a>
Legislative Council	13.11.2002	<a href="#">Official Record of Proceedings Pages 15 - 22 (Question)</a>
Panel on Education	18.11.2002 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Legislative Council	27.11.2002	<a href="#">Official Record of Proceedings Pages 83 - 143 (Motion)</a>
Panel on Education	19.5.2003 (Item V)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Panel on Education	16.6.2003 (Item IV)	<a href="#">Minutes</a>
Legislative Council	3.12.2003	<a href="#">Official Record of Proceedings Pages 79 - 147 (Motion)</a>
Panel on Education	16.2.2004 (Item III)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Panel on Education	19.7.2004 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a>

<b>Meeting</b>	<b>Date of meeting</b>	<b>Paper</b>
Legislative Council	27.10.2004	<a href="#">Official Record of Proceedings Page 69 (Question)</a>
Panel on Education	8.11.2004 (Item V)	<a href="#">Minutes</a>
Legislative Council	2.12.2004	<a href="#">Official Record of Proceedings Pages 5 - 103 (Motion)</a>
Panel on Education	13.6.2005 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Legislative Council	8.6.2005	<a href="#">Official Record of Proceedings Pages 76 - 80 (Question)</a>
Legislative Council	8.3.2006	<a href="#">Official Record of Proceedings Page 78 - 80 (Question)</a>
Legislative Council	17.5.2006	<a href="#">Official Record of Proceedings Pages 70 - 74 (Question)</a>
Legislative Council	21.6.2006	<a href="#">Official Record of Proceedings Pages 83 - 92 (Question)</a>
Legislative Council	6.12.2006	<a href="#">Official Record of Proceedings Pages 37 - 45 (Question)</a>
Legislative Council	24.1.2007	<a href="#">Official Record of Proceedings Pages 191 - 282 (Motion)</a>
Panel on Education	12.2.2007 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a>
Finance Committee	20.3.2007	<a href="#">Administration's replies to Members initial written questions</a>
Panel on Education	16.4.2007 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a> <a href="#">CB(2)1653/06-07(01)</a> <a href="#">CB(2)1735/06-07(01)</a>
Panel on Education	18.10.2007 (Item I)	<a href="#">Minutes</a> <a href="#">Agenda</a>

<b>Meeting</b>	<b>Date of meeting</b>	<b>Paper</b>
Panel on Education	29.2.2008 (Item IV)	<a href="#">Minutes</a> <a href="#">Agenda</a> <a href="#">CB(2)2654/07-08(01)</a>

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7 May 2010