

Further Reading

Although multiple-shift schools are found in many parts of the world, literature on their operation and impact is very scarce. It is common to find passing reference to multiple shifts in official and other reports, but it is rare to find detailed analysis. Much of the material for this book has been drawn from Ministry files and other documents not easily obtainable by the general public. Nevertheless, some relevant publications should be available in large libraries and through inter-library loans. They are listed here.

Bassa-Quansah, Y. (1970): 'The Double-Shift System in Ghanaian Primary Schools', *Teacher Education in New Countries*, Vol. 11, No. 2, pp. 134-42.

Ghana's double-shift system was introduced in 1960. It permitted massive expansion of enrolments, but remained controversial for some years. The author had hoped to compare academic achievement in shift and regular schools. His results on this topic are inconclusive, but he does present interesting data on teacher preferences. Teachers gave seven reasons for preferring the regular system and two reasons for preferring the double-shift system.

Beebout, Harold Seymour (1972): 'The Production Surface for Academic Achievement: An Economic Study of Malaysian Secondary Schools', Ph.D. dissertation, University of Wisconsin, 258 pp.

Beebout examined the academic achievement of 7,674 Form 5 students in 89 West Malaysian schools. He collected data on the number of shifts, socio-economic background, teacher qualifications, class size and several other aspects of the system. This enabled him to control for other factors in multiple regression. Malay-medium students performed more poorly in double-session than in single-session schools, but there was no significant difference in the performance of English-medium students. The dissertation is an excellent example of the techniques and complexities of cost-effectiveness analysis.

Bray, Mark (1988): 'Bisessional versus Unisessional Education: Hong Kong Policies and Practice in Comparative Perspective', paper for the annual conference of the Hong Kong Educational Research Association, 17 pp. [Available free from the author: Department of Education, University of Hong Kong, Hong Kong]

The paper was prepared in the light of official proposals to phase out bisessional schooling in Hong Kong. It first describes the Hong Kong model for bisessional schooling. It then discusses the economic, educational and social issues arising from bisessional schooling. The paper suggests that official policies are based on shallow analysis, and that more careful consideration of issues might lead to a less negative attitude towards bisessional schooling.

Clermont, C.M. & Thomas, R.M. (1985): 'Shift Systems', in Husen, T. & Postlethwaite, T.N. (eds.), *An International Encyclopedia of Education*, Pergamon Press, Oxford, pp. 4565-7.

The article begins by noting the wide range of terms and systems. It then focuses on 10 problems and on the ways that shift systems can help solve them. The problems include shortage of facilities and teachers, unduly large classes, the special needs of subgroups, and the demands of work and study experiences.

Cypress, Beulah (1970): 'Split Sessions are not the Same as the Plague', *American School Board Journal*, Vol. 158, No.4, pp. 28-9.

The article reports reactions of teachers, administrators and students to a pilot double-session programme conducted in Dade County, Florida, USA. Reactions were generally favourable. The author notes the disadvantages of double sessions, but considers them heavily outweighed by the advantages.

De Gregorio, William (1973): 'Tewkesbury's Plan: The Continuous School Day', paper presented at the National Association of Secondary School Principals' Annual Convention, Dallas, 56 pp. [Available from: EDRS, 3900 Wheeler Ave, Alexandria, VA 22304, USA. Ref: ED081063. Microfiche: US\$0.82, Photocopy: US\$20.33]

Tewkesbury High School in Massachusetts (USA) solved overcrowding problems through a continuous school day. Seniors attend school from 7.30 am to noon; juniors from 9.30 am to 2.50 pm; and sophomores from noon to 4.54

pm. No more than 943 students at a time are in the campus, which has a capacity of 1,000. Teachers' schedules are staggered and overlap with the students' schedules. The system allowed the school to offer 183 courses instead of 90.

Edgar, Arthur J. (1980): 'The Shift System in Calabar High School', *Caribbean Journal of Education*, Vol. 7, No. 1, pp. 64–77.

Edgar discusses the operation of a double-shift system in a Jamaican secondary school after four terms of operation. His report contains much practical information on the conversion from a single-shift system and on the mechanics of operating double shifts.

Farrell, J.P. & Schiefelbein, E. (1974): 'Expanding the Scope of Educational Planning: The Experience of Chile', *Interchange*, Vol. 5, No. 2, pp. 18–30.

The researchers investigated academic achievement in 353 schools. They found no significant differences between pupils in single, double and triple shifts, and recommended extension of the shift system in order to reduce costs.

Fowkes, William J. (1969): 'Double Sessions: The High Cost of Saving Money', *The Clearing House*, Vol. 44, No. 2, pp. 76–7.

This is an eloquent attack on double-sessions in the USA context. It raises cogent points, but is one-sided and is based on assertions rather than empirical evidence.

Leo-Rhynie, Elsa (1981): *Report on the Shift System in Jamaican Schools*, School of Education, University of the West Indies, Mona, Jamaica, 118 pp.

This is a detailed analysis of Jamaica's double-session system, which was first proposed in 1953 and then introduced in various phases during the 1960s and 1970s. A team of researchers analysed the impact of double shifts on teachers' workloads, curriculum content, teacher-pupil relationships, extra-curricular activities, and parental attitudes. Few studies of shift systems are as comprehensive and valuable as this one.

Levin, Henry M. (1983): *Cost-Effectiveness: A Primer*, Sage Publications, Beverly Hills, 167 pp.

Levin explains in clear terms the basic procedures for conducting cost-effectiveness analysis and the related procedures for cost-benefit analysis,

cost-utility analysis and cost-feasibility analysis. His examples are all taken from the education sector.

Merrell, Russell G. (1980): *A Report on Alternatives to School Building Construction*, Utah State Board of Education, Salt Lake City, 52 pp. [Available from: EDRS, 3900 Wheeler Ave, Alexandria, VA 22304, USA. Ref: ED197464. Microfiche: US\$0.82, Photocopy: US\$20.33]

The Utah State Board of Education commissioned the author to find ways to reduce massive demands for school construction. Among the options discussed are double-session schooling, an extended school day, and a system of year-round-schools. The report notes that double-session schooling would substantially reduce building demands, and would not necessarily create educational problems. However, the system was not recommended because the report recognised political obstacles.

Myers, Ida P. & Meredith, Nora C. (1963): 'Outcomes of a Large High School Using the Three-Shift System', *The Clearing House*, Vol. 38, pp. 302-4.

The authors evaluated the system of three overlapping shifts in a Florida (USA) school. Among their findings were: (i) most parents accepted the system as a satisfactory solution to overcrowding, (ii) most parents preferred the system to an increase in taxes, (iii) students were broadly content with the system, (iv) indiscipline did not appreciably increase, (v) the system had no significant effect on the achievement of average and above-average students, though may have negatively affected the achievement of below average pupils, (vi) individual students found it difficult to gain help before and after school, and (vii) individual staff found it difficult to meet all their colleagues.

Nighswander, James K. (1971): *The Implications of Double Shift Schooling in Springfield, Illinois High Schools*, 69 pp. [Available from: EDRS, 3900 Wheeler Ave, Alexandria, VA 22304, USA. Ref: ED056077. Microfiche: US\$0.82, Photocopy: US\$5.55]

Because Springfield schools suffered severe overcrowding, an overlapping triple-shift system was introduced. The new system caused excessive congestion during peak periods, and therefore caused safety hazards. After one year of operation, overlapping triple shifts were replaced by end-on double shifts. This report evaluates the double-shift system in its third year of operation. It pays particular attention to space utilisation, academic achievement, extra-curricular activities, attendance, discipline, and family schedules. Students and parents were mostly in favour of the model, but teachers and inspectors were mostly opposed to it.

Windham, Douglas M. (1988): *Indicators of Educational Effectiveness and Efficiency*, project for Improving the Efficiency of Educational Systems (IEES), Florida State University, Tallahassee, 212 pp. [Available free from: IEES Clearinghouse, Learning Systems Institute, 204 Dodd Hall, Florida State University, Tallahassee, Florida 32306, USA.]

The IEES project primarily focuses on the education systems of Botswana, Haiti, Indonesia, Liberia, Nepal, Somalia and Yemen. Drawing on experiences in those countries, the author has prepared a very comprehensive discussion of indicators of effectiveness and efficiency. Perhaps surprisingly, he did not devote attention to multiple-shift schooling. However, the book contains very useful discussion on related areas and on the basic concepts of cost-effectiveness and cost-utility analysis.