

Double-Shift Schooling

Design and operation for cost-effectiveness

- *"Issues associated with double shift schooling are more complex than appear at first sight. Education authorities have to balance a wide range of competing factors and must find strategies which are not only cost-effective but also politically acceptable."*
- *"In most countries, benefits exceed the costs but it is important for policy-makers to assess both sides."*

1 FRAMEWORK FOR ANALYSIS

Definition 1 single set of facilities catering for 2 entirely separate groups of pupils during a school day (taught by same or different teachers)

Purpose increase supply of school places while avoiding strain on the budget

Models

1. end-on shift :1 morning shift, 1 afternoon shift
2. overlapping shifts (more complex but maximum use of facilities)
3. variations in the length of the school week
4. different or shared teachers
5. one set of buildings for 2 levels of education
6. urban and rural systems (urban: efficient use of expensive land, enough pupils to run 2 shifts; rural: alleviates teacher shortages)
7. day and boarding schools: double-shift day schools help reduce boarding; double-shift boarding helps maximize use of facilities whilst continuing serving pupils from remote areas
8. daily, weekly and monthly rotation (uncommon)
9. classes for both children and adults
10. borrowing and renting school premises

Concepts of costs analysis

- Cost-benefit: both costs and benefits expressed in monetary terms
- Cost-effectiveness: only costs calculated in monetary terms, effectiveness quantified in e.g. examination scores
- Cost-utility: dealing with subjective factors, measuring "usefulness"
- Define objective first, then consider different options, weigh "baskets of outcome" and make careful judgement

2 DETERMINING POLICIES

2.1 Economic factors

Major economic benefits <i>“helps deal with population growth and pressure on resources”</i>	Potential costs	Limitations to benefits <i>“double shift only reduces costs by the proportion in the second shift”</i>
Efficient use of land, buildings, facilities and equipment result in reduced unit costs	Cost of extra tuition (to compensate for reduced classroom time) – abuse is common.	Higher costs of maintenance and rehabilitation; Need for extra storage, offices, study rooms, ... Potentially more expensive design
Efficient use of scarce teachers		
Potential savings in teacher salaries, training and/or housing.		Teacher unions may negotiate double pay – or object to double-session teaching.
Potential savings on clerks and ancillary staff		Increased costs of working during “unsocial” hours
Potential release of teachers for other work (productive, domestic)		
Potential release of students for other work (productive, domestic)	Cost of child-minding for working parents; Potential cost of social welfare if out-of-school youth create social problems	

2.2 Educational factors

Advantages	Disadvantages
Potential positive effect on achievement because: <ul style="list-style-type: none"> - reduced class size - libraries, laboratories more easily justified 	Potential negative effect on achievement because: <ul style="list-style-type: none"> - reduced teaching time - tired teachers and pupils esp. hot afternoons - double session teachers have less time for preparation - children missing breakfast when school starts early - difficult to organise remedial or enrichment classes
Potential positive effect on curriculum duration and contents: <ul style="list-style-type: none"> - concentration on core subjects - teachers better equipped with curriculum resources and materials - investments in e.g. sports facilities more easily justified 	Potential negative effect on curriculum duration and contents: <ul style="list-style-type: none"> - reduction of subjects - reduction of extra-curricular activities Poor general atmosphere <ul style="list-style-type: none"> - no cohesive school community - less ownership over classroom and blackboard - discipline problems - chaotic transition between shifts

2.3 Social factors

Advantages	Disadvantages
Increased social equity through: <ul style="list-style-type: none">- more school places- reduced school fees- poor children can go to school whilst still earning a living or doing domestic chores	Potentially reinforcing social inequalities: <ul style="list-style-type: none">- rural vs urban- rich vs poor- different racial groups- academically bright vs weak- desirable vs undesirable sessions
	Risk of restless youth and increased delinquency because <ul style="list-style-type: none">- students get bored in "free time"- less time for school-based guidance and support

3 MAKING DOUBLE-SHIFT SCHOOLS WORK

3.1 School organisation and time-tabling

Q1: Which classes should be taught in which shifts ?

Options	Advantages	Disadvantages
<p><i>Option 1: parallel G1-6</i> a.m. : G 1-6 A p.m. : G 1-6 B</p>	<ul style="list-style-type: none"> • 2 independent schools with (potentially) different staff and headteachers • children can stay in morning or afternoon shift all school career (makes life easier for parents) • potential double use of equipment and materials 	<ul style="list-style-type: none"> • little co-ordination between same grade teachers • no cohesion • afternoon session less popular (difficult to attract teachers, afternoon pupils may feel inferior)
<p><i>Option 2: split junior-senior 1</i> a.m. : G 1-3 p.m. : G 4-6</p>	<ul style="list-style-type: none"> • more fair • easy co-ordination between same-grade teachers • more peer-socialization • simplified organisation esp. if different duration for junior and seniors 	<ul style="list-style-type: none"> • furniture design not adapted to grade-ages • need to buy 2 sets of materials as all children of same age study at the same time • exam class for G6 in afternoon : more difficult to concentrate • no leadership by senior pupils in morning session
<p><i>Option 3: split junior-senior 2</i> a.m. : G 4-6 p.m. : G 1-3</p>	<ul style="list-style-type: none"> • more fair • easy co-ordination between same-grade teachers • more peer-socialization • simplified organisation esp. if different duration for junior and seniors • G6 exam class in the morning: easier to concentrate • privilege for senior children 	<ul style="list-style-type: none"> • furniture design not adapted to grade-ages • need to buy 2 sets of materials as all children of same age study at the same time • children who only just start school have to study in afternoon • no leadership by senior pupils in afternoon session
<p><i>Option 4: alternate grades 1</i> a.m. : G 1,3,5 p.m. : G 2,4,6</p>	<ul style="list-style-type: none"> • alternation is "fair" • easy co-ordination of same grade teachers • morning session for grade 1 children 	<ul style="list-style-type: none"> • problems for families if children are in different sessions • need to buy 2 sets of materials as all children of same age study at the same time • no privilege for senior children • exam class for G6 in afternoon : more difficult to concentrate
<p><i>Option 5: alternate grades 2</i> a.m. : G 2,4,6 p.m.: G 1,3,5</p>	<ul style="list-style-type: none"> • alternation is "fair" • easy co-ordination of same grade teachers • exam class in morning • privilege for G6 children 	<ul style="list-style-type: none"> • problems for families if children are in different sessions • need to buy 2 sets of materials as all children of same age study at the same time • children who just begin school start with afternoon session
<p><i>Option 6: alternate grades 3</i> a.m. : G 1,2,5,6 p.m.: G 3,4</p>	<ul style="list-style-type: none"> • alternation is "fair" • easy co-ordination of same grade teachers • exam class in morning • morning session for grade 1 children 	<ul style="list-style-type: none"> • problems for families if children are in different sessions • need to buy 2 sets of materials as all children of same age study at the same time • only possible for systems with short teaching times for G1 and 2

Q2: How should the timetable be organized ?

General questions to consider		
1. What is the earliest time that children can start school? (considering distance/time from home-school; opportunity for having breakfast; temperature,...)		
2. How frequent and how long should breaks between sessions be?		
3. How much time is needed for the transition between shifts?		
4. What is the latest time by which classes must end? (consider lighting, distance, evening prayers,...)		
Overlap vs end-on shifts	Advantages	Disadvantages
Overlapping shifts	<ul style="list-style-type: none"> • cohesion • flexible use of staff • easier staff co-ordination • less feeling of being disadvantaged 	<ul style="list-style-type: none"> • congestion of school compound (potential safety hazards) • reduced financial savings and/or unsatisfactory conditions • climatic factors plays more strongly (rain, heat) • complex preparation of timetable • “untidy” and “disruptive” students arriving at different times of the day
End-on shifts	<ul style="list-style-type: none"> • 2 independent schools with separate students and sts. also staff • maximum financial savings and conditions • simple preparation of timetable 	<ul style="list-style-type: none"> • lack of cohesion • inflexible use of staff • difficult staff co-ordination • afternoon group feeling disadvantaged

3.2 Staffing and management

Q1: How to staff double-shift systems?

Options	Advantages	Disadvantages
1 head teacher for 2 shifts	<ul style="list-style-type: none"> • cohesion • 1 single address point for parents who have children in both sessions • more flexibility and continuity 	<ul style="list-style-type: none"> • long working hours • cost of deputy head teachers (large school) • less personalised contacts with teachers and pupils • smaller number of promotion posts
2 head teachers (1 per shift)	<ul style="list-style-type: none"> • fewer working hours • more personalised contact with teachers and pupils • bigger number of promotion posts 	<ul style="list-style-type: none"> • less cohesion, flexibility and continuity • difficult co-ordination and liaison • poor maintenance and equipment • risk of putting most prestigious headteacher in morning session • threatened by limited supply of good head teachers
Teacher sharing over shifts	<ul style="list-style-type: none"> • effective measure to deal with teacher shortage • flexible use of resources • flexible timing for teachers (some may teach 1, 1.5 or 2 sessions) • teachers of non-core subjects have more hours to teach • opportunity for teachers to increase income through extra teaching 	<ul style="list-style-type: none"> • risk of teachers feeling overworked, inadequately compensated or professionally frustrated • difficult if 2 head-teachers • teacher union may disagree
Sharing of ancillary staff over shifts	<ul style="list-style-type: none"> • flexible use of resources 	<ul style="list-style-type: none"> • Need to find flexible solutions for deviation from normal working hours

Q2: How to manage double-shift systems?

1. check if there is sufficient supply of appropriate people to staff the schools
2. organise training to discuss ways of: <ul style="list-style-type: none"> • deploying teachers between shifts • deploying ancillary staff between shifts • promoting feeling of school unity • managing moving of students • ensuring extra-curricular activities • adapting main curriculum • liaising with parents over nutrition, safety, rotation of shifts etcetera

3.3 Quality – finding a way around the obstacles

Q1: How to ensure delivery of the main curriculum?

- increase number of school days
- improve teaching methods (better teaching aids, better training and support)
- improve efficiency (esp. actual teaching time)
- encourage out-of-school learning (self-learning, peer correction, group work, public libraries,...)
- 1 room for remedial work or other activities
- Full use of classroom walls for display
- Large enough staff rooms
- Issue of inspection

Q2: How to ensure extra-curricular activities?

<i>problems</i>	<i>solutions</i>
Crowding, lack of space	Organise activities outside school compound (using e.g. community facilities and/or organise visits to e.g. museum, industry,...)
Pupils not free at the same time	Adapt timetabling (1 hour per week, Saturdays...)
Teachers not available as rushing between shifts	Ask senior students or parents to supervise
Activities disturb ongoing classes	Organise activities outside school compound (using e.g. community facilities and/or organise visits to e.g. museum, industry,...); or provide sound proof walls/ceilings

Q3: How to deal with more time spent at home?

- Liaise with parents
- Use of out-of-school time for homework, group work,...
- Consider best time for doing homework
- Consider best waking time and breakfast
- Consider impact of changing shifts

4 CONCLUSIONS FOR POLICY-MAKERS

1. IDENTIFY PRIORITIES

- assess the strength of available financial resources
- assess different outcomes
- consider alternative uses of resources

2. CONSIDER COST-EFFECTIVENESS AND COST-UTILITY OF DOUBLE-SHIFT

- consider best value (not necessarily most cost effective)
- choice of model: end-on vs overlapping
- management structures, recruitment and training
- hours of schooling (/day, /week, /year)
- out-of-school learning (homework, self-instruction, good textbooks, parental guidance)
- use of teachers (supply of teachers, teachers' union views, estimated of impact of teacher tiredness, extent of remuneration)
- extra rooms (for doing homework, remedial work,...)
- use of other community facilities

3. CONSIDER DIFFERENT POLICIES FOR DIFFERENT LEVELS

- separate treatment of junior versus senior sections improves efficiency and gives authorities greater flexibility
- choosing a level to apply double-shifting to is difficult

4. CONSIDER SOCIAL CONTEXT OF POLICY MAKING

- rarely popular with the public (see it as inferior)
- need for publicity – consistent messages to parents, teachers, inspectors and community leaders
- social equity
- reasonably large scale implementation (pilots may be seen as punishments)
- persistent