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Author(s): Ow Suek Yin and Christine K.E. Lee
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Mapping Social Studies Teachers’ Implementation Behaviour on an Innovation Configuration

Ow Suek Yin
Christine K.E. Lee

ABSTRACT

Many large-scale studies (Berman and McLaughlin 1975; Emrick and Peterson, 1978) and reviews (Fullan and Pomfret, 1977) have indicated the need for curriculum developers to pay more attention to the process of implementing new curriculum materials. This study draws upon the tools of the Concerns-based Adoption Model developed by Hall and Loucks to gather information about teacher implementation behaviour in relation to the Curriculum Development Institute of Singapore (CDIS) Social Studies curriculum package. The Innovation Configurations checklist and an open-ended teacher-concerns questionnaire were administered to 725 teachers from 70 primary schools during two survey periods, March to May 1986 and July to September 1986. Analysis of the data provided understanding of teachers’ actual use of the various components of the curriculum and their main concerns. Unacceptable and weak teacher practices were revealed in the field-trips, project work, testing and the teaching of concepts components of the curriculum package. In addition, teachers seemed more concerned about the content area of Social Studies rather than the skills which the curriculum package advocated. The data forms a basis for the development of more effective implementation-facilitating activities.

Introduction

In recent years, the educational system in Singapore has witnessed an increase in the number of curriculum packages developed to assist teachers in implementing new syllabi in schools. Curriculum development work on the Social Studies package consisting of pupils’ textbooks, workbooks, teachers’ guides and media materials started in 1982 and by 1986, all primary schools in Singapore would have introduced the new curriculum package to pupils in Primaries 4, 5 and 6. Social Studies teachers now have richer material resources to teach their programme. As much time and money have been spent on curriculum development with provisions for pilot-testing and revision of materials before mass publication, one major concern of curriculum developers is how much of the curriculum package has been used by Social Studies teachers in the manner in which it was intended.

Numerous large-scale studies (Berman and McLaughlin, 1985; Emrick and Peterson, 1978) and reviews (Fullan and Pomfret, 1977) have indicated the need for curriculum developers to pay more attention to the process of implementing new curriculum packages.
Rand studies on educational change (Berman and McLaughlin, 1975), a landmark for curriculum implementation research, reported that in almost all of the instances studied, adoption of the curricula was not an issue; problems of implementation of adopted curricula dominated the outcome and the success of all the projects studied. Emrick and Peterson (1978) in their synthesis of the outcomes in five studies of dissemination and change suggest information alone is not enough to affect utilization and that interpersonal or social influences are prime determinants of the use of an innovation. Further, they caution that more time and resources are needed for implementation than had previously been expected. Fullan and Pompel (1977) in their review of curriculum implementation research have articulated the need to study the implementation process so as to understand some of the reasons why so many curricular changes fail to become established, with few ideas making it behind the classroom door.

This study draws upon the tools of the Concerns-Based Adoption Model (CBAM) developed by Hall and Loucks (1977) to gather information about teacher implementation behaviour in relation to the Social Studies curriculum package. The concept of Innovation Configurations was used to answer the following specific questions:

(1) What are the tangible operational forms of the Social Studies Curriculum package?
(2) How are Social Studies teachers actually using the Social Studies Curriculum package in the classroom?

An open-ended teacher concerns questionnaire was also used to address the nature of the concerns of Social Studies teachers as they implemented the Social Studies Curriculum package.

Instrumentation and Data Collection

Innovation Configurations represent the operational patterns of the innovation that result from implementation by different individuals in different contexts. Individuals used parts of an innovation like a new curriculum package in different ways. When these parts were put together, a number of different patterns emerged, each characterizing a different use of the innovation. These patterns are called Innovation Configurations. An Innovation Configurations checklist is a means of representing the parts of the innovation and variations in the use of these parts.

The development of the Innovation Configurations for the Social Studies package thus went through different stages:

- identification of the key components of the package as envisaged by the developers (Appendix 1);
- identification of possible variations of the use of the components; and
- categorization of these variations into three classes — ideal, acceptable and unacceptable.

In summary, for the Social Studies curriculum package, eight key components were identified and for each component, four or five variations of use were possible. The Ideal, Acceptable and Unacceptable variations were determined prior to the actual collection of data.

To find out the concerns of teachers in the implementation of the package, an open-ended questionnaire was developed. The questionnaire also included a question on the successes teachers had in teaching the subject.

The two instruments were administered to 725 teachers from 70 primary schools during two survey periods, March to May 1986 and July to September 1986. During each visit to the school, Social Studies teachers were briefed about the components of the Social Studies Curriculum package. The Innovation Configurations checklists were then distributed to all the Social Studies teachers who would then circle the variations that they were presently adopting in the classroom. Teachers were then asked to complete the open-ended teacher concerns questionnaire.

Data Analysis and Results

Teachers' responses to the Innovation Configurations checklist were collated in the form of a matrix. A matrix was drawn up for each school, providing a profile of the state of implementation of the package in each school. The following criteria were used to arrive at the state
of implementation of a component of the package in the school:
• UNACCEPTABLE — if half or more of the Social Studies teachers were practising "unacceptable" variations of the components of the curriculum package;
• IDEAL — if half or more of the teachers were implementing in a manner that was closest to the intentions of the curriculum developers;
• WEAK — if teachers were practising variations that were bordering below and above the "acceptable" line.

Table 1 summarizes the 250 teacher-responses from the survey of 30 primary schools during the period from March to May 1986. The picture for "ideal" variations of components of the curriculum did not look very good. Only 49.6% of the teachers seemed comfortable with the teaching of the content of the package. They covered all the topics in the text-components were identified as the teaching and assessment of concepts and conducting fieldtrips once a term. Not a single teacher was found practising these ideal variations. Pedagogically, although it is good teaching practice to integrate assessment with teaching, as assessment provides feedback to the teacher on pupils’ understanding of the concepts taught, those teachers (69.2%) who attempted to teach and assess concepts were providing "weak" variations. Most of the teachers were teaching concepts but not assessing them.

Graph A highlights very clearly the "unacceptable" variations of the components of the package. The components which have the greatest number of teachers practising "unacceptable" variations are:
• fieldtrips (60.8%);
• project work (30.4%);
• testing (27.2%) and
• concept teaching (12.4%).

<table>
<thead>
<tr>
<th>TABLE 1: TEACHERS’ RESPONSES TO THE INNOVATIVE CONFIGURATIONS CHECKLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s Responses to the Innovation Configurations Checklist</td>
</tr>
<tr>
<td>(250 responses)</td>
</tr>
<tr>
<td>Components</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1. Concepts</td>
</tr>
<tr>
<td>2. Skills</td>
</tr>
<tr>
<td>3. Teaching Strategies</td>
</tr>
<tr>
<td>4. Content</td>
</tr>
<tr>
<td>5. Testing</td>
</tr>
<tr>
<td>6. Instructional Materials</td>
</tr>
<tr>
<td>7. Fieldtrips</td>
</tr>
<tr>
<td>8. Project Work</td>
</tr>
</tbody>
</table>

book and highlighted the main ideas. It would appear that, with covering all the contents in the Social Studies textbook, teachers in Singapore are textbook-bound and the text in a curriculum package is a basic tool in their teaching.

Less than 16% of the teachers were practising “ideal” variations of the other components of the package. The most problematic

These components are fairly new to Social Studies teachers and thus they lack the knowledge and skills to carry them out with their pupils. In addition, Social Studies teachers gave little attention to testing not because they lacked the skills of testing but rather, testing in Social Studies is given a low priority as it is a non-examination subject.
Data from a second survey of 475 teachers from 40 primary schools conducted during the period from July to September 1986 serve to substantiate the reliability of the data in the first survey. The pattern of unacceptable variations of components of the package remained the same (Graph B). Fieldtrips (57.2%), project work (22.7%), testing (9.8%) and concept-teaching (8.4%) remained the components where teacher practices were unacceptable.

In terms of “ideal” variations (Table 2), a fair majority of teachers (54.5%) were practising them with regards to the teaching of content. In addition, 21.8% of teachers were observed using the ideal variations of testing, a fair increase in numbers compared to the first
GRAPH B: PROFILE OF UNACCEPTABLE CONFIGURATIONS
OF TEACHERS' IMPLEMENTATION BEHAVIOUR IN
40 SCHOOLS

Legend:

Unacceptable
Variations

Components:
- Field trips
- Project work
- Testing
- Concepts
- Materials
- Skills
- Strategies
- Content

Numbers:
- 57.2%
- 22.7%
- 9.8%
- 8.4%
- 6.1%
- 2.9%

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TABLE 2: TEACHERS' RESPONSES TO THE INNOVATIVE CONFIGURATIONS CHECKLIST

<table>
<thead>
<tr>
<th>Components</th>
<th>Teacher's Responses to the Innovation Configurations Checklist (475 responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unacceptable Variations</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>1. Concepts</td>
<td>40</td>
</tr>
<tr>
<td>2. Skills</td>
<td>14</td>
</tr>
<tr>
<td>3. Teaching Strategies</td>
<td>0</td>
</tr>
<tr>
<td>4. Content</td>
<td>0</td>
</tr>
<tr>
<td>5. Testing</td>
<td>47</td>
</tr>
<tr>
<td>6. Instructional Materials</td>
<td>29</td>
</tr>
<tr>
<td>7. Fieldtrips</td>
<td>272</td>
</tr>
<tr>
<td>8. Project Work</td>
<td>108</td>
</tr>
</tbody>
</table>

TABLE 3: CONCERNS OF TEACHERS IN 40 PRIMARY SCHOOLS

<table>
<thead>
<tr>
<th>Types of Concerns</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No Concerns</td>
<td>131 (27.6%)</td>
</tr>
<tr>
<td>2. Concerns Relating to Components of the Curriculum Package</td>
<td></td>
</tr>
<tr>
<td>• Teaching of Content</td>
<td>119</td>
</tr>
<tr>
<td>• Use of Instructional Materials</td>
<td>33</td>
</tr>
<tr>
<td>• Fieldtrips</td>
<td>23</td>
</tr>
<tr>
<td>• Project Work</td>
<td>10</td>
</tr>
<tr>
<td>• Testing</td>
<td>8</td>
</tr>
<tr>
<td>• Teaching of Skills</td>
<td>2</td>
</tr>
<tr>
<td>• Teaching of Concepts</td>
<td>2</td>
</tr>
<tr>
<td>3. Other Concerns</td>
<td></td>
</tr>
<tr>
<td>• Pupils' difficulties with the subject</td>
<td>24</td>
</tr>
<tr>
<td>• Non-examination status of the subject</td>
<td>16</td>
</tr>
<tr>
<td>• Lack of curriculum time</td>
<td>18</td>
</tr>
<tr>
<td>• Inadequacy of teacher</td>
<td>3</td>
</tr>
<tr>
<td>• Lack of personal interest in the subject</td>
<td>2</td>
</tr>
</tbody>
</table>

survey (8.4%), that is, teachers were using 40% formal and 60% informal methods of assessment. This increase is due to the fact that, by the time the second survey was conducted, all primary schools were issued with the Social Studies Assessment Guidelines which stated explicitly the Ministry of Education's expectations that assessment in Social Studies should include 40% formal and 60% informal methods of assessment.

The open-ended teachers' concerns questionnaire was only administered in the second survey. Of the 475 responses, about 30% of the teachers indicated that they had no concerns whatsoever. The teachers appeared rather reticent about showing their concerns for fear of being considered as having problems in their teaching. Concerns though need not be perceived as having problems; rather they refer to the "feelings, pre-occupation, thought and
consideration given to a particular issue or task' (Hall, 1977). To be concerned means to be in a mentally aroused state about something.

Table 3 summarizes the nature of teachers’ concerns relating to components of the curriculum as well as other concerns. The majority of the 70% of the teachers who shared their concerns wrote about the difficulties they had with teaching the content of the subject. By contrast, the teaching of concepts appeared to be of least concern to them. Although concepts are part of the content of the subject, Social Studies teachers still have a tendency to emphasize the factual aspects of the content. Some indicated that they wanted more information relating to topics in the package like ASEAN countries and the early pioneers, whilst others found the content relating to the Port and Telecommunications too difficult. To some extent, the responses of the open-ended teachers’ concerns questionnaire substantiated teachers’ responses to the Innovative Configurations Checklist and again pointed to an over-riding concern about the teaching of the content of the subject.

Some teachers were concerned about their pupils’ difficulties in dealing with the subject, particularly the weak and slower pupils in the class. Perhaps, curriculum developers need to pay more attention to developing more suitable materials for less able pupils or slow learners. Other teachers’ concerns related to the lack of curriculum time for the subject. Upon investigation, it was found that in some schools only two periods a week in the school’s time-table were devoted to Social Studies. The issue of the non-examination status of the subject is like a double-edged sword. On one hand, it allows teachers more flexibility in teaching the subject without having to adhere to the rigid requirements of the examination. On the other hand, because it is a non-examination subject, Social Studies is relegated to a low status and commands low priority among the subjects in the school curriculum.

Implications and Recommendations

The Innovation Configurations Checklist has provided baseline data about how Social Studies teachers were actually implementing the Social Studies curriculum package in their classrooms. There is obviously a gap between the present state of implementation and the ideal state desired by the curriculum developers. The findings of the survey highlighted to some extent the obstacles that stood in the way of effective teacher implementation behaviour. These include:

- teachers’ lack of knowledge and skills to implement the more innovative aspects of the new curriculum like project work and fieldtrips;
- the lack of supportive organisational arrangements like curriculum time;
- the need for additional material resources; and
- the low status given to the subject in schools.

Curriculum development should not be narrowly conceived as having ended once materials are written and published. More thought must be given to dissemination activities that will aid the implementation process. Examples of some of these activities are outlined in Appendix 2. They take into consideration that implementation is a process of professional development and growth on the part of the ‘implementers’. There is a need for ongoing clarification, interaction and technical assistance.

REFERENCES


## APPENDIX 1

Innovations Configurations Checklist for the Social Studies Curriculum Package

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teach and assess all concepts</td>
<td>2. Teach the more important concepts and assess them</td>
<td>3. Teach all concepts but do not assess</td>
<td>4. Teach some concepts but do not assess</td>
<td>5. No teaching of concepts at all</td>
</tr>
<tr>
<td>Component 2: Skills</td>
<td>Component 3: Teaching Strategies</td>
<td>Component 4: Content</td>
<td>Component 5: Testing</td>
<td></td>
</tr>
<tr>
<td>1. Teach and assess all skills</td>
<td>2. Teach and assess the more important skills</td>
<td>3. Teach and assess some skills</td>
<td>4. Teach some skills but do not assess</td>
<td>5. No teaching of skills at all</td>
</tr>
<tr>
<td>Component 3: Teaching Strategies</td>
<td>Component 4: Content</td>
<td>Component 5: Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use a variety of teaching strategies</td>
<td>2. Use 60% of teaching strategies as suggested in Teacher’s Edition</td>
<td>3. Use few teaching strategies suggested in Teacher’s Edition</td>
<td>4. Only chalk and talk</td>
<td>5. Read textbook without explanation or teaching</td>
</tr>
<tr>
<td>Component 4: Content</td>
<td>Component 5: Testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cover all topics in textbook and highlight main ideas</td>
<td>2. Cover all topics superficially and highlight main ideas</td>
<td>3. Cover only some topics</td>
<td>4. Teach only when time permits</td>
<td>5. Use only informal methods of assessment</td>
</tr>
<tr>
<td>Component 5: Testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use 60% informal and 40% formal methods of assessment</td>
<td>2. Use 50% informal and 50% formal methods of assessment</td>
<td>3. Use 40% informal and 60% formal methods of assessment</td>
<td>4. Use only written tests</td>
<td>5. Use only informal methods of assessment</td>
</tr>
</tbody>
</table>
Component 6: Instructional Materials
1. Use the materials produced by CDIS and supplement with other materials
2. Use all the printed and non-printed materials produced by CDIS
3. Use all the printed CDIS materials and some of the AVAs
4. Use all the printed CDIS materials but do not use the AVAs

Component 7: Fieldtrip
1. Conduct a fieldtrip once a term
2. Conduct a fieldtrip once a semester
3. Conduct a fieldtrip once a year
4. Does not conduct fieldtrips at all

Component 8: Project Work
1. Pupils do a project after each unit
2. Pupils do a project once a term
3. Pupils do a project once a semester
4. Pupils do a project once a year
5. No project work at all
### APPENDIX 3

<table>
<thead>
<tr>
<th>Ideal</th>
<th>Variations</th>
<th>Concepts</th>
<th>Skills</th>
<th>Teaching Strategies</th>
<th>Contents</th>
<th>Testing</th>
<th>Instructional Materials</th>
<th>Field Trips</th>
<th>Project Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>Variation 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMPONENTS**

Line which demarcates acceptable variations from the unacceptable variations

1. **NOTES**
   - x — marked

2. **IMPRESSION**
   - Most of the teachers seem keen and interested except for one male teacher who feels unsure of himself because he didn’t know how to teach Social Studies.
   - Principal is very supportive.
   - The Sr. Assistant shared her experiences of her fieldtrip with the teachers during Contact Time.

3. **INTERPRETATION**
   - Unacceptable
     - Fieldtrips 9/12
     - Project Work 8/12
   - Ideal
     - Concepts 9/12
   - Acceptable but weak
     - Skills 9/12
   - Teaching Strategies 7/12

4. **RECOMMENDATION**
   - Intervention Strategies (1st Priority)
     - Field Trips: Possible to show assessment procedures and
     - Project Work: cover fieldtrips and project work
   - Testing
     - Intervention Strategies (2nd Priority)
     - Skills
     - Concepts
   - Concern
     - Need to “sell” Social Studies by showing how the subject can be integrated with other subjects in the school curriculum.

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## APPENDIX 2

**Dissemination Framework**

<table>
<thead>
<tr>
<th>Dissemination Activity 1</th>
<th>Dissemination Activity 2</th>
<th>Dissemination Activity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
<td><strong>Objective</strong></td>
<td><strong>Objective</strong></td>
</tr>
<tr>
<td>To provide teachers with good organisational support</td>
<td>To provide information, consultancy services and moral support</td>
<td>To obtain feedback on the Social Studies curriculum package</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td><strong>Strategy</strong></td>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td>To change principal’s role from indifferent-passive to supportive-active</td>
<td>To assist teachers by providing resource materials e.g. list of relevant video programmes, etc if required</td>
<td>a) To find out what teachers think of the Social Studies package</td>
</tr>
<tr>
<td><strong>Tactic 1</strong></td>
<td></td>
<td><strong>Tactic 6</strong></td>
</tr>
<tr>
<td>Develop good rapport through formal conversation/discussion to keep him informed about what other schools are doing, what he can do to assist his Social Studies teachers</td>
<td>a) To explain assessment guidelines to Social Studies teachers</td>
<td>Conduct informal interviews or discussions with teachers, individually or in groups, to obtain feedback for improvement of future reprints and revised editions of Social Studies materials</td>
</tr>
<tr>
<td><strong>Tactic 2</strong></td>
<td></td>
<td><strong>Tactic 4</strong></td>
</tr>
<tr>
<td>To ensure that teachers have easy access to Social Studies AVA package</td>
<td>Hold informal sessions with individual teachers or small groups of Social Studies teachers to inform, clarify and provide moral support</td>
<td><strong>Tactic 5</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Produce a Social Studies newsletter and distribute to all Social Studies teachers</td>
</tr>
<tr>
<td><strong>Tactic 3</strong></td>
<td></td>
<td><strong>Tactic 7</strong></td>
</tr>
<tr>
<td>Persuade school planners to allocate at least one block or double periods a week to facilitate project work</td>
<td><strong>Strategy</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) To find out the extent to which teachers are implementing the Social Studies package as intended by the Social Studies Team in CDIS</td>
<td></td>
</tr>
</tbody>
</table>

**Tactic 6**

Conduct informal interviews or discussions with teachers, individually or in groups, to obtain feedback for improvement of future reprints and revised editions of Social Studies materials.

**Tactic 7**

- Administer questionnaire e.g. IC Checklist, SoC questionnaire
- Focussed interviews to determine the Levels of Use among teachers
APPENDIX 2 (contd)

DISSEMINATION ACTIVITY 4
Re-education

Objective: To provide teachers with the skills and knowledge necessary for effective implementation

School-based Workshops

Strategy 1
To train teachers to organise project work for pupils

Tactic 8
Hold school-based workshops to
— explain what project work is about
— demonstrate how project work is done
— provide teachers with ideas for project work

Strategy 2
To show how Social Studies concepts and skills are to be taught

Tactic 9
— Prepare 2 video programmes
  • one on mapping skills in Geography
  • one on history concepts
— Co-teach/demonstrate to teachers at school-based workshops

Centralised Workshops

Strategy
To familiarise teachers with the procedures in organising field trips

Tactic 10
Prepare worksheets and notes for field trips to places of historical and geographical significance
— Conduct field trips for groups of 25 teachers each time
— Videotape the field trips and make tapes available on loan to teachers

DISSEMINATION ACTIVITY 5
External Communication

Objective
To inform, gain the support or work with individuals or groups external to the users

Strategy
To involve support agencies such as
— other divisions of the Ministry of Education, e.g. Inspectorate, Curriculum Branch, Central Testing Service Branch
— Institute of Education
— Other institutions, e.g. National Museum, PSA, PUB, National Archives
— Subject Teachers’ Associations, e.g. Geography Teachers’ Association, History Association of Singapore

Tactic 11
— Liaise with the Central Testing Service and the Specialist Inspectors of the Curriculum Division concerning assessment guidelines
— Conduct workshops/meetings in collaboration with representatives from these groups
— Make presentations to these groups regarding the Social Studies package
— Invite representatives from these groups to CDIS workshops
— Participate in in-service courses and workshops organised by the Social Studies Department of the Institute of Education