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ABSTRACT

Malaysia is gearing towards becoming a fully industrialised country by the year 2020 as envisaged in the nation’s ‘Vision 2020’. The decline in the number of students taking up science in upper secondary schools over the last decade has caused great concern among many politicians and science educators over the availability of skilled manpower necessary to achieve the nation’s vision. Various measures have been introduced to promote students’ interest in taking up science, among which was the introduction of an inquiry-based science curriculum for all primary schools in 1995. While understanding of basic scientific concepts continues to be an important goal of the new curriculum, the curriculum also emphasises the development of thinking skills, scientific skills, scientific attitudes and moral values.

A qualitative case study methodology was employed to study the status of implementation of the inquiry-based primary science curriculum in two Malaysian schools. The study focused on five experienced teachers each observed teaching a series of lessons on ‘Animal Reproduction’ to primary four pupils. Semi-structured interviews were conducted to find out the teachers’ views and understandings on matters related to science, science teaching and learning, and the science curriculum. Some sense of the science context in the school was established through interviews with the respective head teachers. Documents and records such as school calendars, minutes of meetings, teachers’ record books, pupils’ science exercise books, and science test papers were also analysed to supplement data collected from classroom observations and interviews.

The results of the study reveal that the teachers practised teacher-centred instructional strategies, presenting facts and information directly to the pupils and largely neglecting the aspects of curriculum which deal with the development of skills and attitudes. There was little opportunity for pupils to learn science concepts through practical work and inquiry. Inadequate teacher preparation, poorly designed curriculum materials, an inappropriate assessment system, incongruent socio-cultural context of learning, and lack of professional and organisational support were identified to be among the factors which contributed to the teachers’ inability to effectively implement the inquiry-based science curriculum. Appropriate actions need to be urgently taken to rectify these problems. Otherwise, we may be witnessing another generation of science teaching where inquiry learning is simply an espoused aspiration. The vision of developing pupils into the self-reliant, creative and innovative individuals as advocated in the science curriculum remains distant.
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TABLE OF CONTENTS

ABSTRACT ii
ACKNOWLEDGEMENTS iii
TABLE OF CONTENTS iv
LIST OF TABLES x

CHAPTER ONE: INTRODUCTION

1.1 The Malaysian Education System 1
  1.1.1 Historical background 2
  1.1.2 Overview of the Malaysian school structure 3
  1.1.3 Malaysian primary education 5
  1.1.4 Overview of science education in Malaysia 7
  1.1.5 What does ‘Education’ mean to the Malaysian society? 9
1.2 Study Rationale 10
1.3 Thesis Organisation 11

CHAPTER TWO: DIRECTIONS IN SCIENCE EDUCATION 12

2.1 Views of the Nature of Science: Positivism, Post-Positivism and Constructivism 12
2.2 School Science Curriculum Development 15
2.3 Contemporary Issues in Science Education 18
  2.3.1 Content and process reconsidered 18
  2.3.2 Constructivist view of learning 20
  2.3.3 Learners’ prior knowledge 21
  2.3.4 Learning as conceptual change 23
  2.3.5 Inquiry learning 25
  2.3.6 ‘Hands-on’ and ‘minds-on’ activities 26
  2.3.7 Situated learning 28
  2.3.8 Cognitive apprenticeship 29
  2.3.9 Science, technology and society 31
2.4 Overview of Malaysian Primary Science Curriculum 33
2.5 Summary 35
CHAPTER THREE: CURRICULUM IMPLEMENTATION

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Current Status of Science Teaching</td>
<td>36</td>
</tr>
<tr>
<td>3.2</td>
<td>Key Factors Affecting Curriculum Implementation</td>
<td>38</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Teacher</td>
<td>38</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Cultural context of learning</td>
<td>43</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Curriculum materials</td>
<td>44</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Assessment system</td>
<td>47</td>
</tr>
<tr>
<td>3.3</td>
<td>Teacher Development and Curriculum Implementation</td>
<td>48</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Teacher education programs</td>
<td>50</td>
</tr>
<tr>
<td>3.3.2</td>
<td>School-based teacher development</td>
<td>61</td>
</tr>
<tr>
<td>3.4</td>
<td>Implementation of Malaysian Primary Science Curriculum</td>
<td>67</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Teacher preparation</td>
<td>68</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Curriculum materials and other resources</td>
<td>73</td>
</tr>
<tr>
<td>3.4.3</td>
<td>Assessment</td>
<td>74</td>
</tr>
<tr>
<td>3.5</td>
<td>Summary</td>
<td>74</td>
</tr>
</tbody>
</table>

CHAPTER FOUR: RESEARCH METHODOLOGY

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Statement of Purpose and Research Questions</td>
<td>76</td>
</tr>
<tr>
<td>4.2</td>
<td>Research Design: The Case Study Approach</td>
<td>76</td>
</tr>
<tr>
<td>4.3</td>
<td>Sample Selection</td>
<td>78</td>
</tr>
<tr>
<td>4.4</td>
<td>Participating Schools</td>
<td>78</td>
</tr>
<tr>
<td>4.5</td>
<td>Research Participants</td>
<td>80</td>
</tr>
<tr>
<td>4.6</td>
<td>Data Collection Techniques</td>
<td>81</td>
</tr>
<tr>
<td>4.6.1</td>
<td>Observation</td>
<td>81</td>
</tr>
<tr>
<td>4.6.2</td>
<td>Interviews</td>
<td>83</td>
</tr>
<tr>
<td>4.6.3</td>
<td>Documents</td>
<td>90</td>
</tr>
<tr>
<td>4.7</td>
<td>Research Procedure</td>
<td>91</td>
</tr>
<tr>
<td>4.8</td>
<td>Data Analysis</td>
<td>97</td>
</tr>
<tr>
<td>4.9</td>
<td>Ethical Issues</td>
<td>100</td>
</tr>
<tr>
<td>4.10</td>
<td>Triangulation, Validity, Authenticity and Reliability</td>
<td>100</td>
</tr>
<tr>
<td>4.11</td>
<td>Summary</td>
<td>103</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: CASE STUDY REPORTS (PART I) 104

5.1 Sin Hwa Chinese Primary School 104
5.2 The Headmaster: Mr. Ong 108
5.3 Head of Science: Mrs. Lim 111
5.4 Case Study Teacher (1): Mrs. Lim 113
   5.4.1 Teacher’s profile 113
   5.4.2 Inside Mrs. Lim’s classroom 115
   5.4.3 Mrs. Lim’s knowledge and understanding of science and science teaching 119
   5.4.4 Summary 127
5.5 Case Study Teacher (2): Mrs. Chan 128
   5.5.1 Teacher’s profile 128
   5.5.2 Inside Mrs. Chan’s classroom 130
   5.5.3 Mrs. Chan’s knowledge and understanding of science and science teaching 135
   5.5.4 Summary 141

CHAPTER SIX: CASE STUDY REPORTS (PART II) 143

6.1 St. Elizabeth National Primary School 143
6.2 The Headmistress: Pn. Doris 145
6.3 Head of Science: Pn. Jane 147
6.4 Case Study Teacher (3): Pn. Jane 149
   6.4.1 Teacher’s profile 149
   6.4.2 Inside Pn. Jane’s classroom 150
   6.4.3 Pn. Jane’s knowledge and understanding of science and science teaching 153
   6.4.4 Summary 162
6.5 Case Study Teacher (4): Pn. Christina 165
   6.5.1 Teacher’s profile 165
   6.5.2 Inside Pn. Christina’s classroom 166
   6.5.3 Pn. Christina’s knowledge and understanding of science and science teaching 168
   6.5.4 Summary 174
GLOSSARY OF ACRONYMS

APPENDICES

Appendix A: Structure of the Malaysian Education System
Appendix B: Initiation Activities in the Implementation of Malaysian Primary Science Curriculum
Appendix C: Content of the Twelve Modules on Malaysian Primary Science Curriculum
Appendix D: Interview Protocols
D1: Head Teacher’s Interview
D2: Teacher’s Interview-About-Instances
D3: Teacher’s Curriculum Interview
Appendix E: Permission Letters
E1: Letter To EPRD Requesting Permission to Carry out the Study
E2: Permission Letter from EPRD
E3: Letter To Sabah State Education Department Requesting Permission to Carry out the Study in the Two Schools
Appendix F: Information Sheets
F1: Information Sheet For Head Teachers
F2: Information Sheet For Teachers
Appendix G: Consent Letters
G1: Head Teacher’s Consent Letter
G2: Teacher’s Consent Letter
Appendix H: Questionnaires
H1 Head Teacher’s Questionnaire
H2 Teacher’s Questionnaire
Appendix I: Interview and Lesson Transcripts
I1: Mrs. Chan’s Science Teaching-Learning Strategies Interview Transcript
I2: Mrs. Chan’s Curriculum Interview Transcript
I3: Mrs. Chan’s Interview-About-Instances Transcript
I4: Mrs. Chan’s Stimulated-Recall Interview Transcript
I5: Mrs. Chan’s Lesson Transcript (I)
I6: Mrs. Chan’s Lesson Transcript (II)
I7: Mrs. Chan’s Lesson Transcript (III)
I8: Pn. Doris’s Interview Transcript
Appendix J: Letter To Research Participants Requesting Feedback on Report Findings. 288
Appendix K: Sin Hwa School Scheme of Work for Primary Four Science, 1997 290
Appendix L: Suggested Activities on ‘Animal Reproduction’ from the Teachers’ Guide (Khor, 1994b) 291

REFERENCES 293
LIST OF TABLES

Table 1.1: Number of Primary Schools, Classes, Teachers and Pupils in Malaysia as at 6 January 1997 4
Table 1.2: Number of Secondary Schools, Classes, Teachers and Pupils in Malaysia as at 6 January 1997 4
Table 1.3: Structure of Malaysian Integrated Primary Curriculum (KBSR) 6
Table 1.4: Upper Secondary Enrolment in Malaysian schools by Stream (1981 - 1991) 9
Table 3.1: Four Paradigms of Teacher Education 52
Table 3.2: Primary Four Science Orientation Course Timetable 70
Table 3.3: Syllabus Content of the Pre-service Primary Science Teacher Training Program in Malaysia 71
Table 3.4: Expenditure Incurred during the Implementation of the Malaysian Primary Science Curriculum (1994-1996) 73
Table 4.1: Characteristics of Participating Schools 79
Table 4.2: Participating Schools’ UPSR Performance (1994-1996) 79
Table 4.3: Participating Teachers’ Profiles 80
Table 4.4: Documents Used in the Study 91
Table 4.5: A Summary of the Events Involved in the Research Process 95
Table 4.6: Strategies to Enhance Validity 101
Table 5.1: Sin Hwa Primary 4C Timetable 105
Table 5.2: Summary of Mrs. Lim’s Lessons 116
Table 5.3: Summary of Mrs. Chan’s Lessons 132
Table 6.1: Summary of Pn. Jane’s Lessons 152
Table 6.2: Summary of Pn. Christina’s Lessons 167
Table 6.3: Summary of Pn. Fatimah’s Lessons 176
Table 7.1: Suggested Activities for ‘Animal Reproduction’ in the Curriculum Materials 196
Table 7.2: Orientations to Science Teaching and Learning 205
Table 7.3: Comparing Malaysian Primary Science Curriculum Emphasis and Classroom Practice 216