The implementation of a cognitive teaching approach to games in Hong Kong

This item was submitted to Loughborough University's Institutional Repository by the/an author.

Additional Information:

- Doctoral Thesis. Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University.

Metadata Record: https://dspace.lboro.ac.uk/2134/6872

Publisher: © Yuk-kwong Raymond Liu

Please cite the published version.
This item is held in Loughborough University’s Institutional Repository (https://dspace.lboro.ac.uk/) and was harvested from the British Library’s EThOS service (http://www.ethos.bl.uk/). It is made available under the following Creative Commons Licence conditions.

![Creative Commons Licence](https://i.imgur.com/35j5G5Q.png)

** Attribution-NonCommercial-NoDerivs 2.5 **

You are free:

- to copy, distribute, display, and perform the work

Under the following conditions:

** Attribution.** You must attribute the work in the manner specified by the author or licensor.

** Noncommercial.** You may not use this work for commercial purposes.

** No Derivative Works.** You may not alter, transform, or build upon this work.

- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

Your fair use and other rights are in no way affected by the above.

This is a human-readable summary of the Legal Code (the full licence).

For the full text of this licence, please go to: http://creativecommons.org/licenses/by-nc-nd/2.5/
THE IMPLEMENTATION OF
A COGNITIVE TEACHING APPROACH TO
GAMES
IN HONG KONG

by

LIU Yuk-kwong, Raymond

©Department of Physical Education, Sports Science,
and Recreation Management,
Loughborough University.
1998
To my wife, May
and two sons, Eric and Philip
for their strong support and encouragement.
Abstract

The purpose of this study is to provide a more reflective climate for the teaching of games in Hong Kong and if appropriate, to start the process of introducing a different teaching approach. The current climate of games teaching in Hong Kong was evidenced by the review of the P.E. syllabus, the feedback collected from the P.E. lecturers, national governing bodies and P.E. teachers who are in favour of the traditional approach. Interestingly, 47 out of 155 teachers (30.4%) found difficulty with the existing teaching approach. A pilot study and two workshops provided encouraging results to pave the road for the main and second trial teachings. To suit the culture in Hong Kong, the modified cognitive approach was adopted in the main trial teaching and then followed by the cognitive approach (teaching games for understanding) in the second trial teaching. Two groups of 8 experienced and inexperienced P.E. teachers (4 male and 4 female) were invited to teach Basketball and Volleyball to 420 students in two trials of teaching. Two sets of questionnaires were distributed to study the affective aspects of the teachers and students after each approach. A follow-up interview was designed to study teachers’ changes one year after the workshop. For the teachers’ responses in the Basketball group, significant results indicated that the teachers (t value 3.29 p<0.05) gained more enjoyment with the modified cognitive approach. The results in the follow-up interview indicated that they had different changes influenced by the new approach. For the students’ responses of the Basketball and Volleyball groups, significant result showed that the boys obtained more enjoyment with the modified cognitive approach taught by the male teachers than the girls taught by the female teachers. No significant difference was found in the Basketball group but in the Volleyball group, the students were more enjoyable with the modified cognitive approach taught by the experienced teachers. The findings imply that since both the teachers and students felt comfortable and enjoyed teaching games with the understanding approach, it is an appropriate time to introduce it to Hong Kong.

Key Words: Games teaching; Teaching games for understanding; Affective; Comparison: Approach; Gender; Teaching experience.
Acknowledgment

I would like to thank my Research Director, Professor Clyde Williams and two Supervisors, Mr. Len Almond and Mr. Rod Thorpe, for their encouragement, invaluable advice and guidance throughout this study.

I would also like to acknowledge the eight P.E. teachers and their students for their assistance during the experiments.

Many thanks are also indebted to two national governing bodies, the Hong Kong Amateur Basketball Association and the Hong Kong & Kowloon Amateur Volleyball Association for their contributions in commenting on the lesson plans.

Finally I would like to express my gratitude to 10 P.E. lecturers from three Teacher Training Colleges, 155 P.E. teachers from 75 secondary schools in answering the questionnaires, without whom the study would not have been possible.

By no means least, I would also like to thank Mr. Mike Holliday for assistance with the analysis of statistics and Mr. Rod Thorpe, my supervisor for his proof-reading in English.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>i-v</td>
</tr>
<tr>
<td>Acknowledgment</td>
<td>vi</td>
</tr>
<tr>
<td>List of Tables and Figures.</td>
<td>viii</td>
</tr>
<tr>
<td>Organization of the Thesis</td>
<td>ix</td>
</tr>
<tr>
<td><strong>Part I : Defining the Problem.</strong></td>
<td>1</td>
</tr>
<tr>
<td>Chapter One : Introduction.</td>
<td>2-14</td>
</tr>
<tr>
<td>1.1 Introduction to the Study.</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Area of Interest.</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Statement of the Problem.</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Purpose of the Study.</td>
<td>4</td>
</tr>
<tr>
<td>1.5 Statement of Hypotheses.</td>
<td>4</td>
</tr>
<tr>
<td><strong>Part II : An Overview of Teaching Games for Understanding.</strong></td>
<td>15</td>
</tr>
<tr>
<td>Chapter Two : Literature Review.</td>
<td>16-54</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>16</td>
</tr>
<tr>
<td>2.2 What is Teaching Games for Understanding ?</td>
<td>16</td>
</tr>
<tr>
<td>2.2.1 The Model</td>
<td>20</td>
</tr>
<tr>
<td>2.2.2 Responses in United Kingdom</td>
<td>23</td>
</tr>
<tr>
<td>2.3 Historical Analysis of Teaching Games for Understanding Movement</td>
<td>27</td>
</tr>
<tr>
<td>2.4 Misinterpretations and Criticisms on the Teaching Games for</td>
<td>38</td>
</tr>
<tr>
<td>Understanding Approach</td>
<td>38</td>
</tr>
<tr>
<td>2.4.1 Misinterpretations.</td>
<td>38</td>
</tr>
<tr>
<td>2.4.2 Criticisms</td>
<td>41</td>
</tr>
<tr>
<td>2.5 Conclusion</td>
<td>52</td>
</tr>
</tbody>
</table>
Part III: Status Quo - the Current Position of Games in Hong Kong.

Chapter Three: A Review of Games Teaching in Hong Kong.

3.1 Introduction.
3.2 Historical Background.
3.3 Education Background.
3.4 P.E. in Primary and Secondary Schools.
3.5 Curriculum Development of P.E.
3.6 Games Teaching in P.E. Syllabus.

Chapter Four: Games Teaching in the Physical Education Teacher Training Institute.

4.1 Introduction.
4.2 Background.
4.3 Method.
4.4 Results.
4.5 Discussion.

Chapter Five: The View of National Governing Bodies on the Teaching Games for Understanding Approach.

5.1 Introduction
5.2 Method
5.3 Results.
5.4 Discussion.


6.1 Introduction.
6.2 Method.
6.3 Results
6.4 Discussion.

Conclusion.
<table>
<thead>
<tr>
<th>Chapter Seven: The Not Study</th>
<th>94 - 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Introduction.</td>
<td>94</td>
</tr>
<tr>
<td>7.2 Method.</td>
<td>94</td>
</tr>
<tr>
<td>7.3 Results</td>
<td>95</td>
</tr>
<tr>
<td>7.4 Discussion.</td>
<td>98</td>
</tr>
<tr>
<td>7.5 Conclusion</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter Eight: Procedure.</th>
<th>101 - 114</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Introduction.</td>
<td>101</td>
</tr>
<tr>
<td>8.2 Definition.</td>
<td>101</td>
</tr>
<tr>
<td>8.3 Selection of Sports Activities and Subjects.</td>
<td>104</td>
</tr>
<tr>
<td>8.4 Measurement Tool.</td>
<td>106</td>
</tr>
<tr>
<td>8.5 The Lesson Plans.</td>
<td>107</td>
</tr>
<tr>
<td>8.6 The Workshop.</td>
<td>108</td>
</tr>
<tr>
<td>8.7 The Main Experimental Design.</td>
<td>109</td>
</tr>
<tr>
<td>8.8 The Follow-up Interview.</td>
<td>110</td>
</tr>
<tr>
<td>8.9 Analysis of Data.</td>
<td>111</td>
</tr>
<tr>
<td>8.10 Assumptions and Limitations.</td>
<td>112</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter Nine: Results.</th>
<th>115 - 158</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Introduction.</td>
<td>115</td>
</tr>
<tr>
<td>9.2 Teachers' Responses</td>
<td>115</td>
</tr>
<tr>
<td>9.2.1 Immediate Responses After a Two-day Workshop.</td>
<td>115</td>
</tr>
<tr>
<td>9.2.2 Immediate Responses After a Second Trial Teaching Workshop.</td>
<td>119</td>
</tr>
<tr>
<td>9.2.3 The Main Trial Teaching.</td>
<td>121</td>
</tr>
<tr>
<td>9.2.4 The Second Trial Teaching.</td>
<td>125</td>
</tr>
<tr>
<td>9.2.5 The Follow-up Interview.</td>
<td>129</td>
</tr>
</tbody>
</table>
9.3 Students' Responses 138
   9.3.1 The Main Trial Teaching. 138
   9.3.2 The Second Trial Teaching. 153
9.4 Evaluation of Hypotheses. 158

Chapter Ten: Discussion. 159 - 189
   10.1 Introduction. 159
   10.2 Discussion of Research Design. 159
   10.3 Teachers' Responses.
      10.3.1 The Workshop. 162
      10.3.2 Two Trials of Teaching. 165
      10.3.3 The Follow-up Interview. 170
   10.4 Students' Responses. 182
   10.5 Summary Table of Research Hypotheses. 188

Part V: To Conclude 190

Chapter Eleven: Conclusion and Recommendation. 191 - 198
   11.1 Reflection on the Study. 191
   11.2 The strategic Plan for Dissemination. 194
   11.3 Recommendation for Future Study. 196
   11.4 Conclusion. 197

References 199

Appendixes
   A. Questionnaire for PE lecturers in the teacher training institute. 212
   B. Comments from two national governing bodies. 215
   C. Questionnaire for PE teachers in secondary school. 218
   D. Questionnaire for PE teachers after the workshop. 221
   E. Suggested lesson plan: The modified cognitive approach and the traditional approach for Volleyball. 224
F. Suggested lesson plan: The modified cognitive approach and the traditional approach for Basketball.

G. Suggested lesson plan: The cognitive approach for Volleyball.

H. Questionnaire for the 8 P.E. teachers' responses.

I. Questionnaire for the 420 students' responses.

J. Comment of the Chinese translation of students' questionnaire.

K. Structure of the interview questionnaire.

L. Transcript of teachers' interview - An example.
# List of Tables and Figures

## a. Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Teaching procedures and time allocation of a P.E. lesson.</td>
<td>65</td>
</tr>
<tr>
<td>2.</td>
<td>Teaching procedure and content of a P.E. lesson.</td>
<td>65</td>
</tr>
<tr>
<td>3.</td>
<td>Training programme of Volleyball in the coaching manual provided by the Volleyball Association.</td>
<td>77</td>
</tr>
<tr>
<td>4.</td>
<td>Training programme of Basketball in the coaching manual provided by the Basketball Association.</td>
<td>79</td>
</tr>
<tr>
<td>5.</td>
<td>Two student-teachers’ responses after teaching in secondary school.</td>
<td>96</td>
</tr>
<tr>
<td>6.</td>
<td>Two student-teachers responses after teaching in primary school.</td>
<td>96</td>
</tr>
<tr>
<td>7.</td>
<td>Pupils’ responses after the lessons with a new approach in primary school.</td>
<td>97</td>
</tr>
<tr>
<td>8.</td>
<td>The comparison of results in four dimensions between two different approaches, teaching experiences and genders in the Basketball group.</td>
<td>122</td>
</tr>
<tr>
<td>9.</td>
<td>The comparison of results in four dimensions between two different approaches, teaching experiences and genders in the Volleyball Group.</td>
<td>123</td>
</tr>
<tr>
<td>10.</td>
<td>The comparison of results in four dimensions between two different approaches (modified cognitive and cognitive), teaching experiences and genders in the Volleyball group of the second trial teaching.</td>
<td>126</td>
</tr>
<tr>
<td>11.</td>
<td>The comparison of results in four dimensions between two different approaches (traditional and cognitive), teaching experiences and genders in the Volleyball group of the second trial teaching.</td>
<td>127</td>
</tr>
<tr>
<td>12.</td>
<td>Significant results of two different balls games, approaches, teaching experiences and genders in the Basketball and Volleyball groups.</td>
<td>139</td>
</tr>
<tr>
<td>13.</td>
<td>Overall analysis of variance of Basketball and Volleyball groups.</td>
<td>140</td>
</tr>
</tbody>
</table>
14. Significant results of 3-way interactions among ball games, experience and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups.

15. Significant results of two different approaches, teaching experiences and genders in the Basketball group.

16. Overall analysis of variance of Basketball group.

17. Significant results of two different approaches and teaching experiences in the Volleyball group.

18. Overall analysis of variance of Volleyball group between the traditional approach and the modified cognitive approach.

19. Significant results of two different approaches, teaching experiences and genders in the Volleyball group.

20. Overall analysis of variance of Volleyball group between the traditional approach and the cognitive approach.

21. Overall analysis of variance of Volleyball group between the modified cognitive approach and the cognitive approach.

22. The results of 5 research hypotheses

b. Figures

1. A model of the teaching games for understanding.

2. The experimental design for the main and second trials teaching.

3. Survey on the affective aspect of students with three different approaches.

4. The interest-enjoyment dimension showed difference between the traditional approach and the modified cognitive approach in the Basketball group.

5. The perceived-competence dimension showed difference between the experienced and inexperienced P.E. teachers in the Basketball group.

6. The effort-importance dimension showed difference between the experienced and inexperienced P.E. teachers in the Volleyball group.
7. The effort-importance dimension showed difference between the female and male P.E. teachers in the Volleyball group.

8. Significant results of 2-way interactions between ball games and experience taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups.

9. Significant results of 2-way interactions between ball games and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups.

10. Significant results of 2-way interactions between approach and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups.

11. Significant results of 2-way interactions between experience and gender taught with the traditional and modified cognitive approaches in the Basketball group.

12. Significant results of 2-way interactions between approach and experience taught with the traditional and modified cognitive approaches in the Volleyball group.

13. Significant results of 2-way interactions between approach and gender taught with the traditional and modified cognitive approaches in the Volleyball group.

14. Significant results of 2-way interactions between experience and gender taught with the traditional and modified cognitive approaches in the Basketball group.

15. Significant results of 2-way interactions between experience and gender taught with the traditional and cognitive approaches in the Volleyball group.
Organization of the Thesis

The project is organized into FIVE parts with ELEVEN chapters.

**Part I** Defines the problem (One chapter).

**Part II** Provides an overview of the approach (One chapter).

**Part III** Examines the current position of games teaching in Hong Kong (Four chapters).

**Part IV** Presents research design and data analysis, the pilot study, and the methodology, results and discussion of the main study (Four chapters).

**Part V** Concludes and proposes a plan for dissemination (One chapter).
The teaching games for understanding approach is an innovation that has been investigated in many countries, but these countries tend to have 'European / Western' culture. Hong Kong is unique in that whilst it has been touched by the British systems, it still retains an underlying 'Chinese' culture. How will teachers and pupils react?
Chapter One

Introduction

1.1 Introduction to the Study

The teaching games for understanding movement is an innovation in games teaching developed at Loughborough University during the ‘70s. This approach puts the emphasis on the understanding of games and the development of cognitive experiences, but was designed first and foremost to overcome some of the inherent ‘motivational’ problems associated with a ‘typical’ skill-based approach. The author, teaching and training teachers in Hong Kong saw the same problems existing as those identified and reported by Bunker and Thorpe (1982) when introducing the model. Whilst the approach has been investigated in various countries throughout the world, most notably in Europe and the USA in the teaching situation, and in Australia in both a teaching and coaching situation. The fact that others (e.g. O’Boyle, 1995) noted specifically the value of the approach for mixed ability classes was particularly pertinent to the Hong Kong situation. As early as 1985 Stoddart, a secondary P.E. teacher in the United Kingdom, noted that his students seemed to be enjoying the teaching games for understanding approach far more than the skill-based approach, but the majority of research, from Booth (1983) and Lawton (1989) in the United Kingdom to a variety of authors in the USA in the ‘90s, tends to have concentrated on what is learnt in teaching games for understanding, rather than how teachers and students enjoy the approach.

1.2 Area of Interest

Some physical educators are convinced that teaching games for understanding is a far more appropriate way of teaching mixed ability groups in the school situation, and others recognize that it is, at the very least, a valuable addition to the games curriculum. Despite considerable publicity internationally the author noted a dearth of knowledge in Hong Kong, indeed it was the author’s opinion that there was an unquestioning acceptance of the ‘traditional skill-based’ games lesson. If this opinion was confirmed it would seem desirable to introduce the ideas embraced in the teaching
games for understanding approach if only to prompt a more reflective climate. Hong Kong would appear to provide a challenge for the approach in that games teaching is not only technique based (Curriculum Development Institute, P.E. Syllabus, 1995), but teaching is quite didactic (Butt, 1991). The author realized that the evidence about skill and tactical improvements could be presented to teachers, but recognized that change and acceptance would only occur if the teachers and pupils were to feel comfortable in this new learning environment, in their own 'particular' circumstances. It was the 'motivational' aspects that interested the author.

1.3 Statement of the Problem

It is the author's opinion that games teaching is heavily biased towards skills and techniques and that alternative approaches were rarely used, perhaps because they are not widely known.

The first problem was to assess the accuracy of this opinion by examining syllabuses and seeking opinion and information from key personnel. Department of Education and Teacher Training Institutions and teacher trainers and teachers themselves are obvious sources of information, but it must be remembered that teachers of games are also affected by sport specific information from National Governing Bodies. It follows that the 'status quo' must include sport specific input.

With this information in mind the second problem was to design and test sessions suitable for use in Hong Kong. The author had experience of sessions in the United Kingdom, but equally had to work with teachers and student-teachers in Hong Kong to ensure familiarity and comfort.

At this point the problem was to offer this to sufficient teachers and pupils to gain some idea of the suitability within the Hong Kong situation. The numbers had to be restricted to ensure thorough training and yet selected to be representative.
1.4 Purpose of the Study

In the broader sense the intention of the study is to provide a more reflective climate for the teaching of games in Hong Kong. The author as a teacher and teacher-trainer in Hong Kong had noted the lack of debate in games teaching.

More specifically the author accepting the value of the teaching games for understanding, at least as an added approach to give more variety to a teacher’s repertoire, would wish to embrace this in his own presentation of games in the Institute of Education and suggest other teacher trainers and teachers do the same. To do so would require specific evidence from the Hong Kong situation.

Finally, by examining teaching games for understanding in a culture so solidly skill-based and didactic it is hoped to add to the general literature on the approach.

To focus attention a number of specific questions in the form of hypotheses were generated.

1.5 Statement of Hypotheses

The research hypotheses of this study which are tested by the following operational hypotheses are as follows:

(A) Research hypothesis

H1: There is a difference in the teachers’ and the students’ responses between the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.

H0: There is no difference in the teachers’ and the students’ responses between the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.
(Ai) Operational hypothesis

H1: There is a difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.

H0: There is no difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.

(Aii) Operational hypothesis

H1: There is a difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball.

H0: There is no difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball.

(Aiii) Operational hypothesis

H1: There is a difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Volleyball.

H0: There is no difference between the teachers’ responses in the skill-based approach and the modified cognitive approach on the teaching of Volleyball.

(Aiv) Operational hypothesis

H1: There is a difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.

H0: There is no difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball and Volleyball.
(Av) Operational hypothesis

H1: There is a difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball.

H0: There is no difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Basketball.

(Avi) Operational hypothesis

H1: There is a difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Volleyball.

H0: There is no difference between the students’ responses in the skill-based approach and the modified cognitive approach on the teaching of Volleyball.

(B) Research hypothesis

H1: There is a difference in the teachers' (between the experienced and the inexperienced) and the students' responses between the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

H0: There is no difference in the teachers' (between the experienced and the inexperienced) and the students' responses between the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

(Bi) Operational hypothesis

H1: There is a difference between the experienced and the inexperienced P.E. teachers' responses on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

H0: There is no difference between the experienced and the inexperienced P.E. teachers' responses on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.
(Bii) Operational hypothesis

H1: There is a difference between the experienced and the inexperienced P.E. teachers’ responses on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

H0: There is no difference between the experienced and the inexperienced P.E. teachers’ responses on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

(Biii) Operational hypothesis

H1: There is a difference between the experienced and the inexperienced P.E. teachers’ responses on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

H0: There is no difference between the experienced and the inexperienced P.E. teachers’ responses on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

(Bvi) Operational hypothesis

H1: There is a difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

H0: There is no difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.
(Bv) Operational hypothesis

H1: There is a difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

H0: There is no difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

(Bvi) Operational hypothesis

H1: There is a difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

H0: There is no difference between the students’ responses taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

(C) Research hypothesis

H1: There is a difference in the teachers’ (between the female and the male) and the students’ (girls and boys) responses between the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

H0: There is no difference in the teachers’ (between the female and the male) and the students’ (girls and boys) responses between the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.
(Ci) Operational hypothesis

H1: There is a difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

H0: There is no difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

(Cii) Operational hypothesis

H1: There is a difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

H0: There is no difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

(Ciii) Operational hypothesis

H1: There is a difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

H0: There is no difference between the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

(Civ) Operational hypothesis

H1: There is a difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.
H0: There is no difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball and Volleyball.

(Cv) Operational hypothesis

H1: There is a difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

H0: There is no difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Basketball.

(Cvi) Operational hypothesis

H1: There is a difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

H0: There is no difference between the girls’ and boys’ responses taught by the female and the male P.E. teachers on adopting the skill-based approach and the modified cognitive approach to teach Volleyball.

(D) Research hypothesis

H1: There is a difference in the teachers’ and the students’ responses between the skill-based approach and the cognitive approach on the teaching of Volleyball.

H0: There is no difference in the teachers’ and the students’ responses between the skill-based approach and the cognitive approach on the teaching of Volleyball.
(Di) Operational hypothesis

H1: There is a difference between the teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.

H0: There is no difference between the teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.

(Dii) Operational hypothesis

H1: There is a difference between the experienced and the inexperienced P.E. teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.

H0: There is no difference between the experienced and the inexperienced P.E. teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.

(Diii) Operational hypothesis

H1: There is a difference between the female and the male P.E. teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.

H0: There is no difference between the female and the male P.E. teachers' responses in the main trial and the second trial teaching on adopting the skill-based approach and the cognitive approach to teach Volleyball.
(Div) Operational hypothesis

**H1:** There is a difference between the students’ responses in the main trial and the second trial teaching taught by P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.

**H0:** There is no difference between the students’ responses in the main trial and the second trial teaching taught by P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.

(Dv) Operational hypothesis

**H1:** There is a difference between the students’ responses in the main trial and the second trial teaching taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.

**H0:** There is no difference between the students’ responses in the main trial and the second trial teaching taught by the experienced and the inexperienced P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.

(Dvi) Operational hypothesis

**H1:** There is a difference between the girls’ and boys’ responses in the main trial and the second trial teaching taught by the female and the male P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.

**H0:** There is no difference between the girls’ and boys’ responses in the main trial and the second trial teaching taught by the female and the male P.E. teachers on adopting the skill-based approach and the cognitive approach to teach Volleyball.
(E) Research hypothesis

H1: There is a difference in the teachers’ and the students’ responses between the modified cognitive approach and the cognitive approach on the teaching of Volleyball.

H0: There is no difference in the teachers’ and the students’ responses between the modified cognitive approach and the cognitive approach on the teaching of Volleyball.

(Ei) Operational hypothesis

H1: There is a difference between the teachers’ responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

H0: There is no difference between the teachers’ responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

(Eii) Operational hypothesis

H1: There is a difference between the experienced and the inexperienced P.E. teachers’ responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

H0: There is no difference between the experienced and the inexperienced P.E. teachers’ responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.
(Eiii) Operational hypothesis

\textbf{H1:} There is a difference between the female and the male P.E. teachers' responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

\textbf{H0:} There is no difference between the female and the male P.E. teachers' responses in the main trial and the second trial teaching on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

(Eiv) Operational hypothesis

\textbf{H1:} There is a difference between the students' responses in the main trial and the second trial teaching taught by P.E. teachers on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

\textbf{H0:} There is no difference between the students' responses in the main trial and the second trial teaching taught by P.E. teachers on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

(Ev) Operational hypothesis

\textbf{H1:} There is a difference between the students' responses in the main trial and the second trial teaching taught by the experienced and the inexperienced P.E. teachers on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.

\textbf{H0:} There is no difference between the students' responses in the main trial and the second trial teaching taught by the experienced and the inexperienced P.E. teachers on adopting the modified cognitive approach and the cognitive approach to teach Volleyball.
An Overview of Teaching Games for Understanding

What is our current knowledge about "teaching games for understanding"?
Chapter Two
Literature Review

2.1 Introduction

Teaching for understanding is an innovation in games teaching. It has provoked many P.E. educationalists and professionals to rethink their games teaching approach in P.E. lessons. Subsequently, a movement for this innovation has been formed. Now the teaching for understanding movement has been disseminated from England to many countries throughout the world.

Since the introduction of teaching for understanding, many P.E. professionals involved in this innovation have made great contributions in both theoretical and practical aspects of this movement. However, all their contributions represent individual pieces and cannot provide us with a full picture. Like a jigsaw, this chapter will review the literature related to this movement, including (a) what teaching for understanding is, (b) the historical background of this movement, and (c) the misinterpretation and criticisms on this innovation. It is intended to present a clear conceptual picture of this innovation for all P.E. teachers and to develop a practical and useful strategic plan for dissemination in Hong Kong. In addition, the historical background and different positive and negative reactions from P.E. educationalists and professionals are also reviewed.

2.2 What is Teaching Games for Understanding?

1982 was a great year for innovation of games teaching in the P.E. curriculum. A new approach to the teaching of games, 'teaching for understanding' was documented and published in BAALPE Bulletin by Bunker and Thorpe (1982). Their papers reflected the discontent of some members of the P.E. profession for the traditional games teaching method in England and a new model was proposed.
The discontent originally started in the early 1960s when Wade, a P.E. lecturer, Loughborough College of Education, became dissatisfied with how games were being taught, began to look at the central features of games. He tried to analyze them and developed a framework of common elements for a games curriculum. Later he made contact with Hughes at the Football Association where he developed and published the principles of play notion. This notion, primarily, had a direct influence not only on Wade but also Worthington and Wigmore at Loughborough College of Education. They suggested that games skills should be taught through the principles of play. Some of these ideas were formalized in 'The F.A. Guide to Training and Coaching' (Wade, 1967); the development of small-side games in that book was the vehicle for the transmission of skills.

With influences from Wade, Worthington and Wigmore (Thorpe and Bunker were Loughborough students at the time) began to consider the benefits of small-sided games and games skills through principles of play with their students. When Thorpe and Bunker taught in schools, they became unhappy with the results of a skill-based approach to games teaching.

So many youngsters seemed to be getting no where - very little 'progress' was being made and not surprisingly, interest soon waned.

(Thorpe and Bunker, 1986, p.5)

At the same time, Mauldon and Redfern proposed that P.E. professionals needed to review their method of games teaching. They expressed the opinion that teachers appear to concentrate on 'up-to-date' methods of coaching specific techniques and organizing numbers so as to mould children in adult patterns, rather than on fundamental educational issues or on the children themselves.

(Mauldon & Redfern, 1969, p. 6)
And furthermore, they claimed that

as soon as one begins to review the assumptions underlying both the discontent and manner of most games teaching, it becomes obvious that fresh thinking in this field is long overdue.

(Mauldon and Redfern, 1981, p.v)

At IM Marsh College of Education in Liverpool, they were teaching games to student-teachers. They began to realize that when they taught games separately, they were, in fact, teaching similar things; they tried to pick out the common features of games to teach students.

In all games of the kind we are examining an object of some kind is maneuvered with either an implement or part of the body, and aimed in relation to a goal or target, or a space or other players.

(Mauldon & Redfern, 1969, p.29)

As a result, the common features they found in games were the notions of 'sending away the object', 'gaining possession of the object', and 'travelling with the object'. These notions were related to techniques. From these common features, they proposed an approach which presented a more sensitive way to develop skills in the framework of a game. They recognized that this approach was likely to fail with secondary teachers, therefore they published their work for primary teachers believing them to be more receptive. This bringing together of the common features of games was an important step.

In 1968, Thorpe, worked as a P.E. lecturer at Loughborough and was invited by Worthington to think of the notion that tennis equipment should be adapted for the less able child. Then he started to develop this work and moved away from a skill-based lesson, the concepts of space, attack and defence bases were introduced.
Thorpe was also influenced by educational gymnastics which was very popular in the 1960s and 1970s. He recognized that the rationale for this approach, to teach gymnastics was to pose 'problems' for children to solve in their own way and at their own level, fitted well with ideas being presented by cognitive psychologists and educationalists. However, the weakness was that teachers found it so difficult to set appropriate and challenging problems in gymnastics and therefore they could not present the lesson well to children. Thorpe felt that games were a more appropriate vehicle for these ideas.

Games are a series of problems. You do not have to devise a problem.

(Thorpe, 1990)

It could well be this belief which led many people to see the new games approach as a child centred discovery method.

Furthermore, in 1972, Bunker, a P.E. lecturer at Loughborough, had, by this time, become disenchanted with the skill-based approach to games teaching and introduced the principles of play as core elements into games sessions with his students.

After teaching at Loughborough College for several years, both Bunker and Thorpe (1983) observed that the skill-based and drill method of teaching had tended to concentrate on specific motor responses and had failed to take account of the contextual nature of games. They listed the shortcomings of an emphasis on a skill-based approach which had led to

(a) a large percentage of children achieving little success due to the over emphasis on performance and technique drills.

(b) the majority of school leavers ‘knowing’ very little about games. The production of supposedly ‘skilful’ players who in fact possess inflexible techniques and poor decision making capacity.
(c) the development of teacher dependent performers.

(d) the failure to develop 'thinking' spectators and 'knowing' administrators at a time when games are an important form of entertainment in the leisure industry.

They believed that unlike other sports activities in the P.E. curriculum, the teaching of games should present problems of 'what to do?' and 'when to do it?' and not just 'how it is done?'. If the emphasis was shifted to tactical considerations in a game, children would realize that games could be interesting and offer opportunities to make correct decisions based upon tactical awareness. Obviously, at this point children would begin to be aware of the need for particular techniques as they were required in the game situation.

2.2.1 The Model

Because of these weaknesses found in the skill-based approach, they proposed an alternative and outlined a model (Figure 1) which they called 'teaching for understanding'. Through the procedures of the model, the teacher could help the child to achieve a new level of skilful performance at his or her own ability. Of course the level of performance of each child will vary, however each child is able to learn how to make a decision based upon tactical awareness and to retain an interest and involvement in the game.
(1) Game form: The teacher should aim to teach the full adult version of a game to the children as a long-term goal. It is necessary to introduce children to a variety of game forms in accordance with their age and experience.

(2) Game appreciation: The children should be taught the shape of the game through using its rules. Additionally, the rules will place constraints of time and space on the game, will state how points are scored and will also determine the repertory of skills required.

Figure 1: A model of the teaching games for understanding approach (Bunker and Thorpe, 1982)
(3) Tactical awareness: The next step is to teach tactics which include ways and means of creating space and of denying space to overcome the opposition. The principles of play form the basis for a tactical approach to the game. It is important to realize that tactical awareness will lead to early recognition of the opposition's weakness. This should not be allowed to destroy the game.

(4) Decision making: This step involved 'What to do?' and 'How to do it?' which allows both the children and the teacher to recognize and attribute shortcomings in decision making.

(a) 'What to do?': In deciding what to do, each situation has to be assessed and it is important to recognize cues (like process of selective attention, cue redundancy, perception, etc.) and predict possible outcomes.

(b) 'How to do?': After predicting the outcome, children should decide what on the best way to do it and how to select an appropriate response.

(5) Skill execution: At this stage, the actual production of the required movement is executed. It might consist of the qualitative aspect of both the mechanical efficiency of the movement and the relevance to the game situation. A young child, for instance, might well produce an excellent defensive clear in Badminton in that there was efficient racket head speed and a good angle of contact which put the shuttle behind the opponent. The shuttle might not reach the back of the full size court due to a lack of strength and a lack of technical development but would still be categorized as an excellent defensive clear (Bunker & Thorpe, 1986). Skill execution was always to be seen in the context of the child and the game.
(6) Performance: This was the observed outcome of the skill execution processes measured against criteria that were independent of the child. We could classify the children as good or bad.

By adopting a 'teaching for understanding' approach, the child was immediately challenged by a game and its rules which set the scene for the development of tactical awareness and decision making. After deciding what to do and how to do it, the child would execute appropriate movement with proper techniques. Satisfactory completion of the stages would necessitate modification of the game leading to a careful re-appraisal of the requirements of the new games (Bunker and Thorpe, 1986).

2.2.2 Responses in United Kingdom

In 1976, Almond, who was interested in the evaluation of teaching, was impressed by Thorpe's teaching of Badminton because of the way that teachers were asked to think about games. At the same time he began to consider implementation of the principles of play into games teaching and introduced the ideas to New Zealand students. The results were positive and encouraging. He recognized that this approach would have an impact on games teaching in schools. At the same time, Williamson (1982), P.E. advisor for Suffolk had done some work on questioning the common practice of teaching games and even the games that were being taught. After exchanging and sharing ideas, Almond, Thorpe, Bunker and Williamson thought that it was the right time to ask the teachers to rethink their teaching of games. They began to disseminate the whole idea in summer schools and courses with teachers working in different local education authorities (Conventry Teacher, 1986). The project had taken in many and varied forms including one-day workshops, 2-3 day programmes in schools or colleges, theoretical lectures and practical workshops. Many of them led by Thorpe and Bunker.

Many teachers reacted with positive feedback. Burrows and Abbey (1986) adopted this approach to teach Badminton and concluded that:
I was very pleased with the progress of the group. I found that an understanding and appreciation of 'what' they were trying to do in the game gave them a desire to want to know 'how' to achieve that aim.

(Burrows and Abbey, 1986 p.49)

This is best illustrated by Booth (1983), a Loughborough M.Phil. student, who argued that children learned very little in games and were allowed little opportunity to become involved in the really interesting and challenging aspects of a game, i.e. solving tactical problems and decision making. She outlined an approach to Netball which was based upon the teaching games for understanding approach and was concerned with developing game forms which illustrated the tactics and problems within the game. She concluded:

The game forms I have used here are examples of the game that can be implemented by the teacher to illustrate the tactical problems within the game of Netball. They are not new games but the way in which they are used here allows the players to experience the problems within the game and to move towards finding solutions to these problems.

(Booth, 1983, p.31)

On the other hand, these key individuals at Loughborough began to discuss the whole idea and to write it down for publication. A number of P.E. professionals then contributed papers and articles to supplement and support this innovation.

Kirk (1983) provided some theoretical guidelines for teachers who wished to adopt the 'teaching for understanding' approach and tried to uncover the 'mechanics' of this approach. It was suggested that the word 'understanding' in games playing involved 'acts of cognition' and knowledge in the form of 'principles of play' was a necessary ingredient of 'understanding'. 'Understanding' only took place when new knowledge was integrated with the familiar experience. The teacher should take account of the pupil's previous knowledge before a new idea was introduced.
Almond (1986) also clarified the features of games which were based on problem solving. All the games were characterized by having a set of rules which provided a structure that defined the problem. In order to solve the problem, strategies were employed which required techniques to implement them.

Games making was another idea introduced by Almond and Bailey (Spackman) in 1983 to evaluate the ‘teaching for understanding’ approach. This idea emerged for two reasons.

(1) Almond, Spackman and Booth were interested in developing evaluation tools. Almond and Spackman were interested in evaluating teachers’ understanding of game principles whereas Booth was interested in generating a simple evaluation method for use with pupils. By putting them in a games making situation, the pupils could demonstrate what they were doing practically. Through this opportunity, teachers’ and pupils’ understanding of games could be evaluated.

(2) To teach children the value of rules. It was thought that games making would provide opportunities for pupils to be creative and make something of their own. It could also be used with younger pupils where they learn the relevance and value of rules in the context of having to create a rule to solve a problem that arose in developing a game. Almond (1983) made the point that constructing a game, devising appropriate rules and finding out how a game took shape could reflect a great deal about an individual’s understanding. This procedure had many implications for teachers who adopted a ‘teaching for understanding’ approach because games making could demonstrate how much pupils understood.

However, there was a third reason which was quoted by Williamson who was now a P.E. adviser in Wirral. He recognized that games making could be used as an educational tool. He adopted it as an opportunity for children to make their own games and then explain and teach the game to others. As a result, it also became a child-centred approach.
At the same time, the term 'games creation' appeared in the literature. Almond (1983) argued against using the word 'creation' because he felt that if children were allowed to create their own game they would devise a very complex game and often they were not capable of developing it further. Since children would only work on constitutive rules (a set of rules which is specific to that particular game and supplies the game with its 'essential character'), they would usually end up with a dead end game which could not be developed. However, the word 'making' had a different meaning. Almond's emphasis was to present children with a framework of constitutive rules to play with and allow them to develop regulative rules (rules which govern the conduct of playing and change as a result of experience of playing the game to ensure equity). Consequently, children could develop a very good game which was capable of further development and they would gain a greater appreciation and understanding of the game and its rules (Waring, 1991).

After observing a practical session on 'teaching for understanding', Spackman, Booth and Doolittle (1983) produced a structure for representing such ideas. A logical, sequential and simple set of guidelines were suggested. Nine steps were introduced.

1. Decide upon the problems to be considered.
2. Set up an appropriate game form.
3. Observe play.
4. Investigate tactical problems and solutions.
5. Observe play.
6. Intervene to develop understanding.
7. Observe play.
8. Intervene to promote skill.

Their concern was to assist teachers to think about what it was they were trying to do when they taught for understanding, and to increase their understanding of what was involved in games teaching.
As a result of many practical demonstrations, lectures and articles by the project team, Almond (1986) worried whether the teachers had really changed their teaching or not. Therefore teacher involvement in educational research was encouraged. Through a research-based approach, it was felt that the teachers would act intelligently because they could take steps to overcome the difficulties that create unconscious behaviour patterns and perpetuate untested assumptions. Thus a sensitive and self-critical subjective perspective on teaching could be developed (Almond, 1986).

Although there were numerous positive and supported reactions, many criticisms were also raised. Many in the P.E. profession criticized that the teaching for understanding approach was not a new idea, and was another ‘bandwagon’ that did not really work. One of the major criticisms was that if technique was not emphasized in a lesson, the children could not play the game. Thorpe and Bunker (1983) reacted immediately that techniques were taught but they were not the central aim of the lesson and were solely related to the individual’s need to develop their game. If the game was breaking down because of technical problems the teacher needed to change the game.

Another comment was on the adoption of mini-games and small-sided game in this approach. Thorpe and Bunker (1983) argued that in the past small-sided games were used as a means to develop techniques and skills. However, in this approach, modified small-sided games were the focus for the lesson as principles of play were represented in each game form.

### 2.3 Historical Analysis of Teaching Games for Understanding Movement

Before investigating the historical background of teaching games for understanding the name of this approach needs to be clarified because various P.E. professionals prefer to use different names. Bunker and Thorpe (1982) expressed that:
while children may be preoccupied with any one component of the model at any one time, this will always be in the context of an appropriate game.

(Bunker & Thorpe, 1982. p.10)

Clearly the game lies at the centre of the learning process. However the name, teaching games for understanding, puts emphasis on the word ‘understanding’. From a games perspective, it seems that such a name cannot reflect the actual meaning of this movement. This dissatisfaction can be found even among P.E. staff involved in this movement like Bunker, Thorpe and Almond. Bunker and Thorpe use the term ‘teaching games for understanding’ whilst Almond has begun to use the term ‘game-centred games’ because it reflects the game as the centre of the learning process. Almond’s proposal was greatly influenced by Bruner’s (1966) spiral curriculum because he believed that a new game form should reflect and build on previous game forms. However, in order to avoid confusion for teachers, they all agreed that the name, teaching games for understanding, would be adopted.

Since both names, teaching games for understanding (Bunker & Thorpe) and game-centred games (Almond) describe different perspectives, ‘teaching games for understanding’ emphasizes the philosophy and intentions of games while ‘game-centred games’ is about the operations, it is not easy to select an appropriate name for this movement. In order to get in line with their mutual understanding, the name ‘teaching games for understanding’ is adopted in this project so there will be no confusion for teachers.

After the introduction of the teaching for understanding approach at the Pre-Olympic Conference in Eugene, Oregon in 1984 (Thorpe, Bunker & Almond, 1984), this innovation has attracted great attention and opened up a number of discussions in England and abroad. Subsequently, numerous articles from England, U.S.A. and Australia have been published reviewing the pros and cons of this innovation. These reactions reflect that it has been employed to some degree in the P.E. curriculum in many schools and in the U.K. particularly since the introduction of the National
Curriculum which demanded 'planning and evaluation'. However, little consideration has been given to the historical background of this innovation. On the other hand, it is very interesting to note that Thorpe and Bunker (1986) accepted the comment on teaching for understanding approach in South Australia P.E. Bulletin, 1984 that

the idea of progressing from tactics to skills or from why ? to how ? rather than vice versa, is not new.

(in Thorpe and Bunker, 1986, p.6)

In another article, Thorpe and Bunker (1983) also commented that

it must be said that games centred work is not new.

(Thorpe and Bunker, 1983)

Because of the above, it is important to investigate the history of this approach and assess to what extent this movement is revolutionary or evolutionary (Waring, 1991). This will provide a greater understanding of the historical background of this innovation.

Waring (1991) has studied whether the teaching games for understanding approach is revolutionary or evolutionary. The results show that the teaching games for understanding approach cannot be classified as revolutionary or evolutionary, and the dominance of the skill-based approach in schools has created the impression that teaching games for understanding approach is a completely new phenomenon. In order to verify Waring's finding, a chronological progression of references on the teaching of games from 1933 will be reviewed with other references from the 1930s, 1940s and 1950s.
From 1904 to 1933, a number of syllabi were issued by the Board of Education. They mapped out the content of P.E. lessons in schools. From these syllabi, accurate representation of the content and its teaching strategies with games teaching at that time can be traced.

Major (1958) commented that the 1933 Syllabus did contain some alternatives which allowed P.E. teachers some scope for personal judgement, initiative and enterprise. It is interesting to note that the Board of Education 1933 Syllabus had recognized the common elements which can be carried through games and activities of varying kinds to more advanced games (Waring, 1991). The Board stated that

... many miscellaneous circle, file and team games can be played which include the elements of more advanced games; early training in these will give the children a much better understanding of the major games when in due course they begin to play them.

(Board of Education, 1933, p. 37)

Obviously, there are elementary, and undeveloped elements acknowledged in the 1933 Syllabus which can be identified in a more developed way in the teaching games for understanding approach.

The primary emphasis of the teaching games for understanding approach is the game associated with its tactical awareness and decision making skills (Bunker and Thorpe, 1983). The 1933 Syllabus also mentions tactics in relation to games. It states that:

primarily training in 'team passing' tactics including 'positioning' and differentiation in 'attack' and 'defence' play should be arranged on active 'free practice' lines.

(Board of Education, 1933, p. 38)
The main objective of the Board was to enable the children to learn how to become independent learners and 'free practice' experimenting with equipment and situations was encouraged.

It is particularly important in junior schools to foster this independence of action and self reliance, as it has important bearing on the development of personality and leadership qualities.

(Board of Education, 1933, p.137)

Learning independence and experimenting with situations are in line with the teaching games for understanding approach (Thorpe and Bunker, 1989). However, their individual emphasis appear to contrast. The main concern of the 1933 Syllabus is to develop the child's personality and leadership while the decision making skills in the 'teaching games for understanding' approach are an essential quality of playing games that must be encouraged through the context of the game (Bunker and Thorpe, 1986).

Similar to the teaching games for understanding approach, the 1933 Syllabus appears to appreciate the need and desire of the children to understand the tactics of the game. It stated that

An understanding of tactics which enables a player to be in the right place at the right moment to receive a pass, intercept the ball, shoot a goal etc. must be learnt.

(Board of Education, 1933, p.138)

An appropriate example can be used for illustration, namely, the 2 Vs 1 practice in the teaching games for understanding approach (Spackman, 1983) and 'intercepting in threes' in the 1933 Syllabus.
(1) 2 Vs 1 practice in teaching games for understanding approach.
How do I choose to whom to send the ball?
How will he know if I am going to send it to him?
Which is the best way of getting it there?
How can I deceive the defender and make him think?
How can I send it somewhere else or keep it myself?
How can I deceive the defender without deceiving my team mates?

(Spackman, 1983)

(2) Intercepting in threes
Children arrange themselves three together with one in the middle. The two outside ones pass the ball from one to the other and the inside one has to try and intercept it. If the middle one secures the ball, he change with the player who threw it. Provided space allows the children can run freely and dodge anywhere in which case the practice becomes extremely vigorous.

(Board of Education, 1933)

Comparatively, these two examples are identical. However the teaching games for understanding example has provided an opportunity for the children to select and define more precise tactics during the context practice. As a result, they can begin to acquire a real understanding of the game.

Another difference can be identified with work on techniques:

The ball practices in junior school and upwards will tend to be more closely associated with the techniques and team tactics required for a particular game e.g. ‘passing’ in Dodge Ball, ‘Touch and Pass’ in Netball; ‘footwork’ or ‘heading’ in Football; ‘stick work’ in Shinty or Hockey; ‘hitting’ or ‘bowling’ in Rounders and Stoolball.

(Board of Education, 1933)
The 1933 Syllabus gives the teacher freedom to initiate and develop the practice. As mentioned earlier, Major (1958) commented that the 1933 Syllabus contained some 'alternative' material which gave individual teachers some space for personal judgement, initiative and enterprise. This freedom is good for the teacher but it also suggests that the teacher selects 'quantifiable' elements. It encourages the teacher to move away from 'drills' to teach techniques (Waring, 1991). This separates the 1933 Syllabus from the teaching games for understanding approach.

With the strong influence of the 1933 Syllabus, all the practices and methods of games teaching in 1940s and early 1950s showed no significant changes. Davies (1946) and Dunn (1950) follow the exact practice in games teaching prescribed in the 1944 Syllabus to discuss physical education. Their discussion can be reinforced by a statement made by Edmundson (1950).

What they should know is to be found in the eighteen lessons for infants in the 1933 Syllabus of Physical Training for schools.

(Edmundson, 1950, p. 89)

At that time, there was an increasingly heavy emphasis on technique work in games teaching. Such dominance of technique work was evidenced in numerous references (Potter, 1934, Board of Education, 1937; Davies and Lawther, 1941; Davies, 1946; Marshall, 1949 and Williams, 1948). In 1947, however, Davies started to question this emphasis and begun to identify the distinction between the activities and the results of activities.

Physical training has benefits for all children and adolescents and the benefits are gained by doing, by making mistakes and by overcoming them, with emphasis on process, as well as result.

(Davies, 1947, p. 103)
Although such a question was raised, no further practical advice was given to the teachers to supplement their practices.

With the emphasis on free play, experiment and guidance, Dunn in 1950 also criticized the drawbacks of an emphasis on technique work which might discourage the children to participate in games.

It is through such games and activities that most of the necessary ability and understanding of the major games can grow, and not through the rather dull and static technique practices. In such a way, the fun and enjoyment can be maintained from the time the child first plays with the ball.

*(Dunn, 1950)*

In addition, she pointed out that the real enjoyment of a game is to deal effectively with the problems presented in the game.

*We all know the pleasure of being ‘on form’ when we have been able to deal effectively with these changing situations or with any problem which is presented to us.*

*(Dunn, 1950)*

Her thinking lies in the same direction as the teaching games for understanding approach particularly on two aspects: drawbacks of over emphasis on technique work and the problem presented in a game situation.

Both Bunker and Thorpe (1986) identified that

if we can help children to ‘understand’ games and to reduce the importance attached to the teaching of techniques in strictly controlled situations then the joy and satisfaction of games will be open to children of all abilities.

*(Bunker and Thorpe, 1986, p. 25)*
They also contended that each game situation poses a problem and all children, whatever their physical ability, can enjoy the pleasure of solving the problem using their bodies as skilfully as possible.

In 1952, Randall commented on the work in primary and junior schools which had great influence on the teaching of gymnastics in secondary schools. This is an important and interesting fact because individuals such as Thorpe and Bunker (1986) in the teaching games for understanding approach were influenced in the development of an alternative way to teach games by gymnastics teaching. Randall also emphasized that the skill should not become the end in itself. If it does, a lack of appreciation for the children who apply their learned skills in the game might not be found. So he encouraged the practice in its proper game context.

A skill, therefore, must be restored to its game context as soon as possible.

(Randall, 1952, p.65)

No P.E. lessons should be so technique-weighted and at least half the lesson time should be allocated to the practice of the skills restored again to their former context.

Randall's recommendation is in line with the teaching games for understanding approach which also put emphasis on practice in the context of the game, the modification of the game form and the adoption of technique if necessary. Unfortunately, Randall's suggestions have been misinterpreted by the P.E. professionals as technique work and then a game tagged on at the end of the lesson.

Such misinterpretation can be evidenced in the Syllabus of Physical Training for Boys in Secondary Schools, (London County Council, 1954) which proposed the structure of a game lesson was as follows:
Part I (10 minutes)

Opening activity
Rhythmic jump
Dorsal trunk exercise
Arm exercise
Lateral trunk or abdominal exercise

Part II (20 minutes)

A class activity
Group skill practices directed towards one game or sport only e.g. Soccer.
A quick closing activity.

It suggested that more time should be allocated to skill practice for games.

It will be noted that skill practices have been introduced at the period of the year when the games to which they are related are being played. To achieve this, the time thus saved is available for the general activity section of the lesson, which has been strengthened by the introduction of many skill practices directed towards Football, Basketball and Tennis.

(London County Council, 1954)

In 1959, the approach to games teaching seems to shift a little away from technique work to tactics. Huntley (1959) identified the importance of tactics and she gives equal weighting to both technique work and tactics.

A P.E. teacher should have some knowledge of technique and tactics so that she can coach in a stimulating and confident manner.

(Huntley, 1959, p.163)

Additionally, she also focused on the importance of understanding the game because she thought that a games lesson can only be dull when the teaching is so poor that the
game is imperfectly understood by the children. This is what Bunker and Thorpe (1986) advocate to understand games the careful development of the strategy, tactics and the principles within a game would seem to be desirable.

(Bunker and Thorpe, 1986, p.25)

However, it is unfortunate that the tail of technique work has not been cut. She still suggested that in a P.E. lesson, time must be given to training in technique if major games are to be enjoyed to the full and children are to reach a high standard of play (Huntley, 1959).

From the above evidence, the origin of the teaching games for understanding movement can be revealed. There are some elements which can be identified from the past with the teaching games for understanding approach but others that are completely different. It means that the teaching games for understanding approach has different evolutionary strands but there is little evidence to suggest that they are connected. On the other hand, the teaching games for understanding approach is also a revolution in the sense that it challenges what some people have been taught and what they have practised for many years, therefore in this sense it is revolutionary because it challenges existing thinking. In the same way people who have not read about the influences on games teaching from a historical perspective may perceive teaching games for understanding as revolutionary. It seems that this conclusion does not match with Waring’s (1991) finding: teaching games for understanding approach is a completely new phenomenon. Teaching games for understanding evolved from the recognition of a problem with the teaching of games and solutions to the problem led to the development and articulation of teaching games for understanding. Thorpe and Bunker (1986) quote from a South Australian source (mentioned earlier on p.29) which makes the point that critical elements of teaching games for understanding are not new but no one previously has presented it in a coherent framework and this is new.
2.4 Misinterpretations and Criticisms on the Teaching Games for Understanding Approach

The teaching games for understanding approach has been one of the most stimulating innovations (Sparkes, 1987, Smith, 1992) and a new phenomenon (Waring, 1991) in the world of P.E. in the 1980s and early 1990s. Innovation is an extremely complex issue and teaching games for understanding approach as an innovation has many aspects. After the introduction of this approach in 1982, a series of workshops, seminars and practical sessions were organized to emphasize the rationale, the effectiveness and the implementation of this approach. Many P.E. professionals in schools saw it as another 'bandwagon' which would soon will be replaced by something else. Within the last 15 years, this approach has been the focus for considerable debate and discussion.

Several major misinterpretations and criticisms of this approach will be reviewed and discussed as the following. The major misinterpretations include small-sided games, techniques/skill, discovery approach and cognitive approach while the major criticisms concern its philosophy, gender issues, individualism and the games education model.

2.4.1 Misinterpretations

a. Small-sided games

Many teachers perceived teaching games for understanding at in-service courses and interpreted it as just small-sided games not looking further at the content to understand what else was involved. Bunker and Thorpe (1986) explained their views to teachers at the Coventry project:

In the past small-sided games have been used as a means to develop techniques and skills, with the techniques and skills taught as the 'meat' of the lesson.

(Bunker & Thorpe, 1986, p.58)
The games team felt that small-sided games on their own were not progressive. Bunker and Thorpe built up to them, passed through them and went beyond them as forms of progressive, enabling games where the progressive element represented the development of principles of play. In the teaching games for understanding approach, small-sided games were merely a vehicle for modifying the game. They represented a game form for the development of game appreciation, tactical awareness and decision making.

b. Technique / skill

Many teachers were set in their ways using a traditional style lesson format, including a warm up, technique, and game. They felt that the way to teach games was through techniques and skills. Teachers found difficulty in accepting the change of focus to games modification and core principles and, an apparent neglect of techniques. The teachers in the Coventry project reflected that

you need to teach techniques in order to teach games...

(Bunker & Thorpe, 1986, p.57)

The major misinterpretation was that a brief teaching games for understanding course did not deal with techniques. The games team argued that if teachers based their teaching on techniques as the main focus, the lack of skill of children would be highlighted and emphasized. What the games team believed was the need to provide children with simple games to play and with more opportunities to practise skills. However, they believed that technique had a role in games teaching and teachers should intervene only when the lack of technique was breaking the game down. At the same time, technical practice need not be class-based and it might be more appropriate to focus on the individual or small group when something was going wrong. The important idea in teaching games for understanding was teaching a technique at the right time for a particular child.
At another level, national governing bodies also felt that teaching games for understanding was anti-technique and anti-competition because the games team was pushing the notion of every child, developing games to involve children in playing, and not emphasizing winning or losing. This is an oversimplification because the games contained winning and losing and indeed children were taught how to win and lose. Those teachers and coaches in favour of teaching games for understanding put in a lot of effort to try and ensure that people's perception of the approach was correct. This is illustrated by Maynard (1991) who proposed an understanding approach to teaching Rugby Union as well as to promote mixed participation. The implication might be to provide an opportunity for national governing bodies to understand more about teaching games for understanding which was not anti-technique nor anti-competition.

c. Discovery approach

Many teachers interpreted teaching games for understanding as being a child discovery-based games approach. In some cases, the work in primary schools by Williamson reinforced this message because children were asked to devise and develop their own games. However, in the teaching games for understanding approach, the idea in games was not asking children to discover games. In the process of playing a game, children were encouraged to ask questions about why they were doing something. As a result, they could begin to understand why they were doing it, e.g. 'Why is there a service line in Badminton?' and 'Why is the net this high?'

The misinterpretation came about because many teachers perceived the notion of asking questions as a discovery-based approach. Basically, the games team believed that teachers should identify game forms that represented an important element of a major game and provide an opportunity to progressively learn a game through the evolution of game forms chosen by the teacher. The latter would throw up a number of questions which the children could pose about their understanding of the games, their rules and how they should be played. The main justification of this approach was to involve children in their own learning so that their understanding naturally evolved as they played and discovered the answers to the various 'why?' questions.
This approach was entirely different from asking children to discover games for themselves. One of the most important developments of teaching games for understanding was the move towards a games making approach (Almond, 1983) which at first sight might seem separate from the teaching games for understanding movement. However, it had an important association with teaching games for understanding, particularly as a way of evaluating 'understanding'.

d. Cognitive approach

Because of the focus on understanding, many people including Thorpe, had seen teaching games for understanding as a cognitive based approach to learning games. In many respects, this assertion would appear to be correct because teachers are asking questions and expecting children to explore and think through solutions. However, Almond believes that the process of asking questions to encourage children to think about games did not produce a new cognitive based approach in games teaching. Like Best (1978), he believes that decision making must not be confused with thinking which creates new cognitive structures. On the other hand, psychologists tend to speak of cognitive approaches when talking about skill and making selections about what to do. In this sense a cognitive approach is descriptive and an illustration of a process. This is illustrated in Thorpe's article (1990) which identified the psychological factors underpinning the teaching games for understanding movement, which included affiliation, achievement, self direction, social facilitation and so on. Psychology had played an important role in providing wide ranges of different contexts for teaching games (Thorpe, 1990). The effect would be not only on cognitive thinking. It may be quite inappropriate to term teaching games for understanding as a cognitive based approach, nevertheless cognition in the psychological sense is involved.

2.4.2 Criticisms

a. Philosophy

Many P.E. teachers attempt to wrestle with the philosophy of this approach. They stressed that skills and techniques are important in teaching games and they thought
that if tactics were emphasized instead of skills and techniques, the pupils would not be able to play the games. Brackenridge (1983), a P.E. lecturer at Sheffield City Polytechnic (now based at Cheltenham and Gloucester Institute of Higher Education) and a central figure, was also critical in her letter to Almond:

The critique of 'mechanical Vs reasoned' understanding is fair. The notion of understanding only being recognized when it can be 'cashed in' is important, but I'm still concerned about the implication that technical proficiency is ipso facto part of understanding.

(Brackenridge, 1983)

The above criticism, highlights the fact that a large number of P.E. professionals have misinterpreted this approach, believing that skills and techniques will be knocked out and disappeared in P.E. lessons. They are reluctant to adopt this change in games teaching, refusing to accept the innovations because they believe that the skill-based approach is still effective with no associated serious problems. They also fear that if they introduce the teaching games for understanding approach, the move away from teaching skills and techniques may devalue their lessons in the eyes of other people (Bunker and Thorpe, 1986).

There are two reasons to explain the teachers' thinking. Firstly, they cannot provide evidence to show the effectiveness of their current approach (skill-based approach). They think that an approach is effective if it keeps children busy and happy during a lesson, therefore, when they teach with a skill-based approach, if every child is busy and happy a lesson is considered to be excellent. However, they do not recognize that this is a limited form of evaluation.

Secondly, besides keeping children busy and happy, it is easier for teachers to plan a lesson using a skill-based approach, with a set a lesson formats including warm up, techniques, and games. More recently, this approach has been shown to have serious faults with research by Buck and Harrison (1990) indicating that children regress in skill level during games play. They postulated that a common error in teaching skills is
to practise the skill using techniques and drills and then incorporate it into a game situation. This is also illustrated by Peterson (1992) who reported that

it is very common to see an elementary school class practice soccer dribbling around cones, practice dribbling and shooting at a goal and then play a game. However, the skills that are practised often fall apart in games, and students and teachers get discouraged because teaching these skills does not appear to affect performance.

(Peterson, 1992, p. 37)

The teaching games for understanding approach has been misinterpreted with individuals claiming that ignoring skills and techniques would lead to a game being played at a mediocre standard. Actually, skills and techniques will still be taught in the P.E. lesson but will no longer be the main section of the lesson. Of course, the approach does start with the game rather than the techniques, but skills are introduced to pupils when and where appropriate once they are needed in the game situation. In this way children recognize the role of techniques in their development as a games player. Again, Thorpe (1990) clarified the need to teach techniques:

A major criticism of our approach is that we do not teach skill. That is quite wrong. We do but the technique will always be appropriate to the individuals needs.

(Thorpe, 1990)

Unfortunately, many teachers are confused about skills and techniques. Almond identifies a critical distinction between skill and technique when he emphasizes that

we never said that skills don’t matter! We have said that techniques don’t make games... It is about skills, but they have been locked into techniques based things and practising techniques as being an important factor.

(in Waring, 1991)
In addition, Bunker and Thorpe (1983) define skills as the application of techniques to a specific situation and context and techniques are quite different taken out of context. So the emphasis of this approach must be on skill because it is central to the game (the context) and to the whole process. Techniques, however, can be divorced entirely from the context of the game, removing the game as central to the learning process (Waring, 1991).

Children can play a game even if they have not learnt the techniques of that particular game. It is possible to play a good game with poor techniques. Thorpe (1990) further explained that it was impossible to develop some of the skills needed to play the adult form of the games within the P.E. programme, but it was possible to help the children succeed. He emphasized that

if motivation is enhanced and opportunity provided, children may wish to commit the necessary time outside the P.E. programme to improve all elements of their games. Success might therefore be measured in continued commitment to sport rather than short term performance changes.

(Thorpe, 1990, p.212)

b. Gender issues

Nowadays, the gender issue triggers off heated discussion and debate but it was not so prominent when the teaching games for understanding approach was introduced in the early 1980s. Ignorance of gender issues is a recent criticism of the teaching games for understanding approach by Evans & Clarke (1988) and Flintoff (1990). However, Brackenridge, a central and active figure in the feminist movement today, does not raise any gender issues related to this approach so perhaps this criticism is not valid. As mentioned previously (p.42), Brackenridge pays more attention to the philosophy of ‘understanding’ of game. She stressed that:
the one outstanding problem in my mind over the whole approach to games remains the delicate interrelationship between tactical answers and technical constraints.

(Brackenridge, 1983)

Evans and Clarke (1988) commented that teaching games for understanding was limited as an innovation as it paid little attention to the importance of gender issues.

TGFU herald little that is new for the curriculum, especially for those involved in the teaching of girls’ P.E.

(Evans & Clarke, 1988, p.130)

Flintoff (1990) also criticized the failure of the teaching games for understanding approach to address the notion suggested by Talbot (1986) that the objective of teaching girls’ games in P.E. was to prepare them for participation in women’s sports after they left school.

She further highlighted this gender issue with an example of teaching Rounders to girls, stressing that:

the activities we teach to girls are restrictive and difficult and that there are few avenues for girls to continue these after they leave school.

(Flintoff, 1990, p.93)

Lastly, she concluded that working towards a more equal relationship between the sexes must be centrally involved in the innovation of the teaching games for understanding approach.

The above criticism is not valid because mixed P.E. lessons are common in schools, allowing both boys and girls to learn games. In addition, competitions and extracurricular activities for mixed teams are also organized to enable girls to utilize skills
and interests from the P.E. lessons after school hours. It is very interesting to consider why girls cannot participate in games after they leave school. Similarly, another argument citing the 'restrictive and difficult' activities is also invalid because it is extremely hard to quantify what number constitutes restrictive or excessive. Apart from Rounders, girls are also taught Netball, Tennis and Hockey at school. In addition, if girls are taught with the teaching games for understanding approach, they will understand the underlying principles of games. Games have many things in common, for example, the principles relevant for soccer are very similar to those relevant for Hockey. Indeed, girls have ample opportunity to participate, understand how to play various games after they leave school, Thorpe believes that:

"the natural outcome of the teaching games for understanding approach is the development of a games education that ensures that children experience and gain insight into the wide variety of games possible."

(Thorpe, 1990, p.95)

Thorpe reflected that the teaching games for understanding approach did not wrestle with gender issues is misleading because he felt that the focus should be on the individual (Waring, 1991). The approach puts emphasis on individuality and does not specifically address gender issues. It is a 'child' based approach aimed at offering equal opportunities to every child. Each child can have equal access to games and the opportunity to experience success and enjoyment irrespective of their level of physical ability.

However, Thorpe accepts the criticism that they have not specifically wrestled with the gender issues, which dominate today's thinking, but would try to address individual problems if there was sufficient time and expertise (in Waring, 1991). This might become a key issue for all P.E. professionals adopting this approach to discuss and investigate in the future.
c. Individualism

Another critical criticism attacking the political dimension of the teaching games for understanding approach is individualism. Laws (1990) attempts to discover whether teachers' commitment to individualism is expressed in their practice of teaching games. A 3-year research project has examined the concept and practice of individualism and individual development within the teaching games for understanding approach. The finding indicates that individualistic approaches are expressed in the formal intended curriculum, they are not always evident in the practice of games teaching.

Issues of equality of opportunity, equal value and worth were recognized by teachers but their practice did not express their commitment to these issues... The capacity of teachers to achieve a child centred approach in their practice was related to the distribution of power on schools and departments and the limits inherent in the philosophy of individualism.

(Laws, 1990, p.2)

There are a few arguments with Laws' article. Both Laws and the P.E. teachers involved in the research have narrow perception and misunderstanding on the teaching games for understanding approach. They do not really understand the rationale behind this innovation and the way to implement it.

Laws attempts to show how the teaching games for understanding approach fosters an ideology of individualism. However, a false dichotomy has been set up when we study how Laws interprets this approach.

The new initiative aims to shift the emphasis to cognitive rather than purely technical aspects associated with games, supposedly to enable the barrier to be lifted to offer all pupils the opportunity of equality of experience.

(Laws, 1990, p.2)
From the above, what would a ‘purely technical’ aspect of a game look like? According to Laws interpretation, the teaching games for understanding approach represents a shift from the ability to perform a technique to conceptualize at least the extent that children are required to understand concepts of space and depth. This interpretation can have various meanings. It can mean that someone who has no significant ability to play the game but who knows the rules of the games. Similarly, it might also mean that understanding which is represented by someone who knows which skill to perform and when to do it, but who can never actually perform it themselves. Laws’s interpretation does not fully match with the real aim of what Thorpe, Bunker and Almond take the notion of ‘understanding’ to be. The rationale of ‘understanding’ is to enable the child to play the game intelligently rather than simply making appropriate responses achieved only through mindless drill.

‘Equality of experience’ is another misinterpretation from Laws on the teaching games for understanding approach. Understandably, for Thorpe, Bunker and Almond the idea of equality was not a major issue in their deliberations about the development of a new approach to teaching games. They were concerned with providing more opportunities for children to play the game intelligently so that they could continue to play the game outside of school and after they had left school. It would seem that Laws has taken this notion from Evans and Clarke (1988) who point out that in the case of TGFU, for example, it is claimed that success can be more easily achieved by the majority of pupils and that their aims are more relevant for children within today’s society where it is desirable for all pupils to be offered equality in terms of experience.

(Evans and Clarke, 1988, p.128-129)

Again, this misinterpretation indicates that Laws has not caught the spirit of this innovation.
In curriculum organization of the research, the programme was to ensure both boys and girls experience the same curriculum in a mixed-sex grouping situation. However, the conclusion shows that the organizational and curriculum changes to suit each individual child, in practice only serve to emphasize the inequalities.

Despite the apparent emphasis on the contextual and cognitive nature of games when the children were asked to mix in such situations the differences in physical skill tended to reinforce the differences between the sexes.

(Laws, 1990, p.2)

Mixed-sex grouping is the best way to encourage both sexes to participate actively and happily in the games. However, the P.E teachers ignore the functions of games making which is proposed by Almond in 1983 to supplement the teaching games for understanding approach. Games making enables the children to understand the tactical and decision-making features of games. By constructing a game, devising appropriate rules and finding out how a game takes shape, we learn a great deal about individuals understanding the principles of play (Bailey & Almond, 1983). The ignorance of games making reflects that the P.E. teachers do not fully understand the implementation of the teaching games for understanding approach. As a result, this will lead to Laws’s finding.

Apart from adopting games making, grouping by ability in mixed-sex groups might be a possible solution to avoid inequality in the game (English, 1988). There is no discrimination against the less able members of the performance dominant group. Competition with those close to one’s own ability usually provides the most incentive and satisfaction.

d. The model of games education

Recently, there has been considerable debate and discussion about the games for understanding model (Chandler & Mitchell, 1990, Werner & Almond, 1990, Werner, 1990). Werner & Almond opened the debate by pointing out that in the development
of physical education, more and more activities were added to the curriculum. As a result of an extensive variety of activities, children have little time to become skilful players. In order to resolve this problem, teachers should begin to consider the inclusion of games based on a systematic selection process. Both Werner and Almond (1990) suggested a framework for providing a basis for selection, from which classified games by type and the teaching of these games from a technical base to a strategic or tactical base. The theory behind is that common principles from each game category are transferable, thus ensuring the general knowledge of games in relation to the underlying principles of play.

The use of a framework provides a basis for selection and allows a teacher to build on information learned in the playing of one game when introducing and playing a game from the same category.

(Werner & Almond, 1990, p.23)

Chandler and Mitchell (1990) criticized Werner and Almond’s (1990) games for understanding model on several aspects.

Our response is focused on philosophical questions arising out of the use of a ‘framework’ for the selection of games in the curriculum, and on the need for testing and disseminating the ‘understanding’ approach to the teaching of games.

(Chandler & Mitchell, 1990, p.19)

Firstly, they questioned that the model placed games rather than children at the centre of the educational process.

One wonders how they might answer the question, ‘Do you teach children or game?’

(Chandler & Mitchell, 1990, p.19)
Secondly, they also argued that the adoption of the model could lead to teachers explaining strategic and tactical points to children and then merely ‘rolling out the ball’ as opposing to teaching. Thirdly, they reflected that the model had not been tested. Finally, they stated that Werner and Almond needed ‘to make explicit their value-orientation’.

In response to these criticisms, Werner (1990) clarified that the intention to suggest a systematic selection process to the P.E. teachers was to ensure that the children over time were truly educated and did not just receive an exposure curriculum. He continued to point out that children were very definitely the central concern of the games for understanding model because game forms were changed to meet the needs of children. He implied that, providing teachers were trained properly in the necessary pedagogical skills, ‘rolling out the ball’ should not be a problem associated with the model. In addition, he also referred to an article by Lawton and Werner (1989) giving a better idea as to how intentional and sequential teaching for understanding could work.

In his rebuttal of Chandler and Mitchell, Werner stressed that games for understanding model could withstand empirical validation. Not only for this model, the Mauldon and Redfern (1981), and Ellis (1983) models also all needed to be examined. On the final criticism regarding ‘making explicit of value-orientation’, Werner recognized the work of Jewett and Bain (1985) and Giroux (1981) but chose not to address this question because of the length of the manuscript. On the other hand, he stated that further articles would deal with this topic in the near future.

An examination of the articles written in Bulletin of Physical Education, the Physical education Review and the British Journal of Physical Education lead to the conclusion that the teaching games for understanding approach is aimed at providing children who are capable of playing different types of games and will carry on to play these games for the rest of their life. Based on this understanding, one must conclude that the games for understanding model reflects the disciplinary mastery value orientation as it
is primarily concerned with the transmission of physical education subject matter and is equivalent to the play education model described by Jewett and Bain (1985).

2.5 Conclusion

In conclusion, at one level, there are misinterpretations related to technique and the child-centred approach, and on the other level, there are criticisms about individualism and gender issues. However, these latter misinterpretations and criticisms are from a different era. Historically, they are being critical with the hindsight of time as new issues emerge. It could be argued that these critics look at something from a distance without grasping the internal rationale together with its historical roots. The underlying factors for these misinterpretations and criticisms are that these people are commentating at a particular level without the hindsight of the underlying perceptions of the authors and the historical development of an idea. If they had the opportunity to attend practical courses and experimented with the approach they may well have perceived teaching games for understanding differently. However, it is always problematic that critics with highlight specific weaknesses, without comprehending the whole picture and its central focus. Nevertheless these criticisms are reinforced when researchers take a closer look at schools. The real issue is that translating a message into practice is difficult. In addition, Almond has stressed that the games team were aware of this issue but they did not appreciate the enormity of the task or how to do it. Whilst they worked on developing the innovation, they may well have thought that they understood how to make new ideas accessible to teachers. To some extent their belief that teaching games for understanding should only be demonstrated in a practical mode, giving teachers the opportunity to raise questions and pose practical issues, was a step in this direction. Nevertheless, it seems clear that they had not completely understood the process how to translate ideas into practice. So this is the real problem for the games team to solve it out in the future.
It is important therefore to consider Fullan's (1993) proposals that in order to be more effective in promoting a new approach with teachers, the innovators should understand some essential elements about change and the complexity of the change process in advance. Fullan (1993) listed four core capacities involved in change (i) personal vision-building, (ii) inquiry, (iii) mastery and (iv) collaboration. He expressed the view that teachers should examine and re-examine their personal vision of what they are teaching (personal vision-building) and make it explicit for themselves. They should adopt a questioning and experimentation approach (inquiry). They should acquire the skill to implement the new ideas (mastery) and need to work together as a team in order to accomplish things (collaboration).

In response to the change process, it is important to recognize that change is complex because it is impossible to map out all the complexities of a particular problem. For example, the games team were not aware at the time that criticisms about gender would emerge as an issue. Since change in dynamically complex circumstances is non-linear, we cannot predict or guide the process with any precision (Stacey, 1992). However, Fullan (1993) proposed 8 lessons of dynamic change and summarized as follows for reference.

Simultaneously pushing for change while allowing self-learning to unfold; being prepared for a journey of uncertainty; seeing problems as sources of creative resolution; having a vision, but not being blinded by it; valuing the individual and the group; incorporating centralizing and decentralizing forces; being internally cohesive, but externally oriented; and valuing personal change agency as the route to system change.

(Fullan, 1993, p.41)

It is hoped that lessons from the innovation of teaching games for understanding together with Fullan's proposals about change will inform practice and speed up the dissemination of the teaching games for understanding approach in the near future.
After reviewing the literature of the teaching games for understanding approach from the beginning of this chapter, the author has attempted to gain a better understanding of the historical development of the teaching games for understanding movement as well as the difficulties and criticisms found during dissemination in Britain and to other parts of the world. Obviously, such understanding would facilitate a smooth and successful introduction of this new approach to Hong Kong.

Footnotes

1. National Director of Coaching, the F.A. Lancaster Gate, London, United Kingdom.

2. Staff of Loughborough College of Education.

3. The provision of small-sided games in a lesson serves as a vehicle for practice of techniques and skills but not the game itself.


5. The Loughborough key individuals involved in teaching for understanding.

6. They criticized TGFU on gender issues.
Status Quo -
the Current Position
of Games in Hong Kong

Many factors influence the climate in which games teaching occurs. To help understand this climate certain key areas were reviewed, including the physical education syllabus, the attitudes of teacher trainers, key personnel in the national sporting bodies, and of course the physical education teachers.
Chapter Three

A Review of Games Teaching in Hong Kong

3.1 Introduction

As mentioned in chapter one (section 1.1, p.2), the teaching games for understanding approach has been disseminated from U.K. to U.S.A., Australia as well as New Zealand since 1982. From the research findings, there is no doubt that this approach really works. Incidentally, all these countries are English-speaking areas and also with similar cultural background. It is interesting to investigate how it works in Hong Kong - an area with a different culture.

This project is unique in that this approach is practised in an area with a different English culture. Although Hong Kong is a British Crown Colony, more than 95% of the population are Chinese. British control has been more or less accepted by the majority of Chinese, but Hong Kong Chinese have remained Chinese outwardly, loyal to the great Chinese tradition rather to any particular regime (Endacott, 1973). Their mother tongue is Chinese but English also plays a role as an international language with foreign traders.

In this chapter, a brief outline of the historical and educational background of Hong Kong is given to facilitate the understanding of the culture of Hong Kong. In addition, relevant literature will also be reviewed. Since there is not much literature related to games teaching in Hong Kong, more emphasis will be paid on the discussion of the P.E. syllabus. With this pre-requisite knowledge, it is appropriate for us to find a standpoint for this innovative approach.

3.2 Historical Background

The history of Hong Kong really began with the advent of the British in 1841, which arose out of the trade between the merchants of western Europe and China. Hong Kong is a British Crown Colony situated on the south-east coast of China. It
comprises the island of that name which was obtained from China in 1841, the small
district of Kowloon on the mainland just opposite, which together with Stonecutters
Island, was secured in 1860, and a larger area of the mainland, called the New
Territories, which was leased for ninety-nine years in 1898. Geologically, the colony
is similar to the neighboring land mass of which it is an integral part. The coastline is
deeply indented and provides ideal shelter for shipping. This area now has a population
of over 5.9 million people. This is astonishing, because it is apparent that the area is
incapable of supporting this number from its own resources. Hong Kong’s most
valuable asset is not its land, but its water; between the island and the mainland, only a
quarter of a mile away at its narrowest part, lies a magnificent harbour, almost
landlocked and an ideal anchorage for shipping. Hong Kong is the product of its
harbour and shipping has been and still is its life blood. The island is therefore
geographically favoured as a trading centre.

3.3 Education Background

It could be said that the first five years after the Second World War was a period of
restoration and the following 30 years was a period of expansion. In the 1960s and
1970s rapid expansion was possible because the economy was flourishing and could
furnish the necessary financial support. Up to the end of the 1970s, the government’s
effort at providing education was mainly devoted to increasing quantity rather than
improving quality. The beginning of the 1980s, however, saw a change of emphasis: the
pace of expansion has now slowed down and more attention is being paid to the
quality of education. Hong Kong is now experiencing a period of consolidation and
refinement in its education development.

The development of education in Hong Kong since 1842 has been subjected to two
major influences, namely, British and Chinese. These two forces have interacted with
each other to produce the present-day education system in Hong Kong. Although the
Chinese traditionally have a high regard for education, there were no formal schools on
the island when it was taken over by the British. According to an article by Fung
(1986)
the general practice was for wealthy families to employ teachers to tutor their children at home. The British at that time held the view that the government should not concern itself with providing education for the people.

(Fung, 1986, p.301)

Thus, in the early stages, education was largely left in the hands of religious organizations such as the London Missionary Society, the Church of England, and the Roman Catholic Church. The government began to show an interest in education when it started building its own schools in 1858 and established a Board of Education to administer them in 1860. In anticipation of an upsurge of enrolment in Chinese primary and secondary schools in the years ahead, the government introduced the first education ordinance in 1913. The Japanese occupation from 1941 to 1945 caused much damage to education in Hong Kong. In 1951, the government approved a five-year plan for the building of new government schools and the expansion of primary education because of the influx of immigrants from China after the communists succeeded in taking over the country. It was apparent by the early 1960s that Hong Kong could and should devote more resources to education. A White Paper entitled *Education Policy* issued in 1965 reported that

> the final aim of any educational policy must to provide every child with the best education which he or she is capable of absorbing, at a cost which the parents and the community can afford.

(Hong Kong Education Department, 1965)

By 1970, with the achievement of the primary education target in sight and the economic stage set for a rapid take-off, it became possible to improve on the recommended number of subsidized secondary school places. In that year, a decision was made to launch a large-scale expansion secondary education. In 1978, a free and compulsory universal education up to the age of 15 plan was implemented. After about a decade of accelerated expansion, the government decided to ask the Organization for Economic Co-operation and Development to review the situation. One of the most vital recommendations was to set up of an Education Commission to
formulate, develop and review the education policy in the future. In 1984, the Education Commission Report No.1 was published and subsequently, five reports regarding curriculum development, open education, the structure of tertiary education, educational research respectively, have been completed and recommendations are made for future development of education in Hong Kong.

The school system in Hong Kong encompasses two or three years of kindergarten education, six years of primary education, three years of junior secondary education, two years of senior secondary education, and one or two years of sixth-form education. Students enter tertiary education after form V, lower VI or upper VI at the age of 17, 18 or 19 respectively. Primary schools in Hong Kong are not differentiated by curriculum, but their treatment of the curriculum varies considerably. At the secondary level, schools can be classified into three types according to their curriculum: grammar, technical, and prevocational. The differences between the grammar and technical schools are not very great, particularly at the junior secondary level, since many grammar schools include practical subjects in their curriculum whenever facilities permit. This is in keeping with the aim spelt out in the 1974 White Paper that

all children should follow a broadly similar course of junior secondary education comprising, within flexible limits, a balanced blend of academic, practical, and cultural subjects.

(Hong Kong Education Department, 1974)

3.4 Physical Education in Primary and Secondary Schools

After World War II, physical education was taught in all primary schools from primary one to six but it was not a compulsory subject. Two periods per week were allocated for the teaching of physical education throughout the primary curriculum. It aimed at developing the child a sound body and it had a strong influence from army drill and Gymnastics. The content included Gymnastics, Dance and Games.
Since the education system was not well established before 1960, there were no strict qualification requirements for P.E. teachers in primary schools. It meant that all teachers were allowed to teach P.E. even if they had never been trained to teach P.E. Of course, there were some trained P.E. teachers from the three Training Colleges, namely, Northcote Training College (established in 1939), Grantham Training College (established in 1951) and Sir Robert Black Training College (established in 1960). However, the total number of P.E. graduates from these three Training Colleges could not meet the tremendous demand for P.E. teachers due to the sudden expansion of primary education. As a temporary solution, the in-service part-time supplementary P.E. course was offered to those who had not been trained to teach P.E. This practice lasted until 1990 when an Education Act (Hong Kong Government, 1990) was endorsed which forbade the Education Department granting any special discompensation for untrained P.E. teachers to teach P.E. in schools.

Although there is no official document regarding this situation, it is evident in the first P.E. Syllabus 'A Scheme of P.E. for Hong Kong Primary Schools' that

the untrained teachers will find some difficulty in teaching the apparatus work involved in the scheme, but the College teacher will find the work relatively simple.

(Physical Education Section, 1964)

Nowadays, P.E. is a compulsory subject in schools and two periods of P.E. lessons per week/cycle are allocated. The content has met remarkable changes. In lower primary classes, physical education is in the form of structured play and modified games, nurturing skills common to games and sports such as running, skipping, jumping, throwing, kicking and catching. In upper primary classes, physical education is in the form of physical activities including actual sports and games of various kinds such as Basketball, Football, Handball, Volleyball, Badminton, Table Tennis, Gymnastics, Athletics, Dance and Swimming.

In secondary schools, physical education is recognized as an integral part of the secondary school curriculum. As in primary schools, students in secondary schools
are taught basic skills in Athletics and various sports including Dance, Gymnastics, Swimming, Basketball, Football, Handball, Volleyball, Badminton and Table-Tennis.

3.5 Curriculum Development of P.E.

In the 1960s and 1970s, education in Hong Kong expanded tremendously due to sound economic development. Subsequently, the sudden expansion in education led to a remarkable increase of educational support in schools. One of the most important concerns for an educator was that the success of the school expansion programme had exacerbated the problems relating to curricular provision.

From post World War II to the end of the 1960s, the school curriculum was mainly designed by the Inspectorate Division of the Education Department. During that period, the curriculum was not well-documented or comprehensive. In P.E., all the material related to the teaching of P.E. was greatly influenced by Britain. P.E. teachers adopted the British syllabus to teach their pupils. It is evident in the first P.E. syllabus that teachers basing their work on U.K. schemes with an age range 5-11 years have been putting out lessons which are below the basic needs of the children in the scope and in skill and aptitude.

(Physical Education Section, 1964, p.1)

The first syllabus called *A Scheme of Physical Education for Hong Kong Primary Schools* was published by the Inspectorate of the P.E. Section of Education Department in 1964.

This scheme forms a suggested syllabus for P.E. in primary schools, and should be read with discrimination and not as an official directive which must be necessarily be adopted.

(P.E. Section, 1964, covering page)
Generally speaking, this was not a syllabus. However, it served as a guide for the P.E. teachers in primary schools until 1977 when an official syllabus for primary school P.E. by Curriculum Development Committee was published.

In 1970, the Curriculum Development Committee was set up as a non-statutory advisory committee to advise the Director of Education Department on the school curriculum. Under this committee were specialist committees which helped to develop detailed syllabuses and curriculum guides for each school subject. In achieving the concept of a common course of general education for junior secondary forms by the White Paper (HKED, 1974), two syllabuses, *Secondary Education in Hong Kong over the Next Decade, a New Preliminary Guide of Curriculum* (CDC, 1974) and *the Provisional Syllabus of P.E.* (CDC, 1975) representing a significant improvement in the quality of education provided for the junior secondary forms were published by the Curriculum Development Committee. Physical Education was one of the subjects officially being placed in the common-core curriculum. This provisional syllabus served as a foundation for the subsequent editions in 1980, 1985, 1988 and 1995.

**3.6 Games Teaching in the P.E. Syllabus**

Basically, the content of both P.E. syllabuses for the primary and secondary levels are different. At primary level, appropriate exercises for body conditioning to develop strength, endurance, speed, agility and flexibility are encouraged while at lower secondary level, a wide range of activities are recommended. However, in upper secondary classes, selected activities, based on the student's particular ability or interest to a much more advanced level are proposed.

Games are important activities and are being taught in both primary and secondary classes. In the syllabus, *A Scheme of P.E. for Hong Kong Primary Schools, 1964*, the content of games is summarized as follows.
Junior 1: Bouncing and catching a ball
Junior 2: Running, bouncing, dribbling, heading, catching and batting.
Junior 3: Feinting, passing and intercepting.
Junior 4: Long ball, bounce ball, dribbling relay, round obstacle and captain ball.
Junior 5: Underhand serve in Volleyball and Tennis serve.
Junior 6: Softball pitching and base running.

From the above, it seems that in lower primary classes, basic movement like throwing and catching, passing and receiving, dribbling and bouncing are introduced. Sports activities such as Football, Badminton, Volleyball, Softball are being taught in upper primary classes.

Following this trend, the revised P.E. syllabus of 1995 does not show any notable changes but the criteria for selection of content have shifted by putting more emphasis on the intrinsic motivation of games and interest of the children.

Teachers should select those interesting games or activities in order to satisfy the child’s need to play and to have fun through playing games.

(Curriculum Development Institute, 1995, p.66)

Additionally more concern is also placed on children’s physical fitness and characteristics.

For lower primary classes, the games should be simple, imaginative and less demanding. For upper primary classes, the teaching materials of games should be more demanding in techniques, co-operation and endurance than those for lower primary classes.

(Curriculum Development Institute, 1995, p.66)

Apart from that, the content is also more systematic and well-organized and more attention is paid to the linkage between the primary and secondary levels. The games are categorized into simple games, ball games and relay games. In lower primary
classes, less demanding simple games are introduced while more demanding team games and relay games are taught in upper primary classes. Attention is drawn to the continuity of the content between the primary and secondary levels. The reason may be due to the fact that it is really difficult to find a cut-off point between them. It is hoped that careful selection of content might help the children to progress in the games that are played.

In secondary level, games are taught in adult form. Two categories of games are introduced namely, team games (Basketball, Football, Volleyball, Handball, Hockey, Softball, Netball) and individual games (Table Tennis, Badminton and Tennis). Owing to shortage of time, these games are recommended to be taught selectively based on school facilities and teachers’ expertise. However the three team games (Basketball, Football and Volleyball), which are the most popular games in Hong Kong, should be introduced but it is suggested that they should not take up most of the time allocated to physical education.

As these three team games are the most popular games in Hong Kong, the teaching of these games should not take up the majority of the time allocated to physical education. A balanced physical education programme should be aimed at.

(Curriculum Development Institute, 1995, p.45)

From the P.E. Syllabuses for Secondary Schools, 1975, 1980 and 1988, there are no recommendations on what games should be taught in lower and upper secondary classes. However, it is suggested that a wide range of basic skills should be taught in lower secondary classes and the finer aspects of the skills, tactics and theory and laws of the games should be introduced in the upper secondary classes.

In the first three years, as wide a variety of basic skills as possible should be taught without touching the finer aspects of the skills.

(Curriculum Development Committee, 1980, p.61)
Unlike the content of games, there is no difference in the teaching strategy of the games lesson in both primary and secondary levels. With the strong influence from Britain, games teaching in Hong Kong is heavily biased towards the skill-based approach. The games lesson is highly structured with emphasis on teaching of techniques. Evidence can be found in both P.E. syllabuses for primary and secondary schools. In the syllabus, ‘A Scheme of P.E. for Hong Kong Primary School, 1964’, a games lesson is structured with the following steps and allocation of time as specified in Table 1.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Time Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening activity</td>
<td>5 minutes</td>
</tr>
<tr>
<td>2. General activity</td>
<td>7-10 minutes</td>
</tr>
<tr>
<td>3. Games</td>
<td>12-15 minutes</td>
</tr>
<tr>
<td>4. Order activity</td>
<td>1-5 minutes</td>
</tr>
</tbody>
</table>

Table 1: The teaching procedure and time allocation of a P.E. lesson.

All materials taught in each step are mainly on technique which is the central aim of the lesson and games might serve as a vehicle for the techniques. An example is outlined in Table 2 for reference.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening activity</td>
<td>-Ball control.</td>
</tr>
<tr>
<td>2. General activity</td>
<td>-Target throwing.</td>
</tr>
<tr>
<td></td>
<td>-Skills.</td>
</tr>
<tr>
<td>3. Games</td>
<td>-Captain ball.</td>
</tr>
<tr>
<td>4. Order activity</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: The teaching procedure and content of a P.E. lesson.

For twenty years, the teaching strategy of the games lesson has remained unchanged and the teaching of techniques is paramount.
A game lesson should comprise three parts. The first part should include warming-up activities. The second part should be devoted to the teaching and practising of skills and movements. The final part is closing activities.

(Curriculum Development Institute, 1995, p. 7)

Similarly, it is also recommended that for upper primary classes, the teaching materials of games should be more demanding in techniques.

With suitable equipment and facilities, basic techniques in Basketball, Football, Volleyball, Badminton, Table Tennis and Handball should be introduced.

(Curriculum Development Institute, 1995, p. 68)

With no exception, the P.E. Syllabuses for Secondary Schools, 1975, 1980 and 1988 put emphasis on techniques. For example, in Volleyball, the suggested basic skill practices consist of underhand dig, volley pass, underhand service, floater service, setting, spiking and blocking whereas the recommended Football skills and techniques include kicking and passing, ball control, heading, tackling, shooting, goal-keeping respectively.
Chapter Four

Games Teaching in the P.E. Teacher Training Institute

4.1 Introduction

It takes time and key people to introduce, develop and promote the formation of a climate for change. The skill-based approach in games teaching is a good example. It has taken nearly 35 years to develop the approach and has now formed a climate in Hong Kong. However, within these 35 years, a few approaches to games teaching has been developed outside Hong Kong. One of them, for example, the teaching games for understanding approach was initiated by Thorpe and Bunker at Loughborough University, England in 1982. After 15 years of dissemination, some in international publications, what has happened in Hong Kong? Does it exert any influence on the P.E. teacher training institute? Can it find a place in such a skill-based climate?

Understandably, key people like P.E. lecturers have great influence on games teaching in Hong Kong. This chapter gives an overview of the current climate in games teaching in the P.E. teacher training institute. It is hoped that a genuine, updated and clear picture of the current climate in games teaching in the P.E. teacher training institute can be portrayed.

4.2 Background

The Hong Kong Institute of Education, formerly the 5 Training Colleges in Hong Kong, namely, Northcote Training College, Grantham Training College, Sir Robert Black Training College, Technical Teachers’ College and the Institute of Language and Education, was newly established in 1994. It is mainly responsible for training non-graduate primary and junior secondary school teachers. The P.E. department is found separately in three campuses - Northcote campus, Grantham campus and Black campus.
There were all together 22 P.E. lecturers serving the various campuses in 1994-1995. Nearly 1/3 of them have undergone overseas P.E. training (in England) and the rest are trained locally. They specialize in various sports such as Athletics, Ball Games (Basketball, Football, Handball, Volleyball, Badminton, Table Tennis and Tennis), Dance, Gymnastics, Trampolining and Swimming. Generally, all of them have adequate competence to teach all sports activities to P.E. student-teachers. However, most of them are normally assigned to take up their lectures and practical sessions according to their own specialization, interest and competence.

Games teaching is a dominant area in both primary and secondary levels. In general, nearly 30% of the P.E. curriculum time is allocated to games (CDI, 1995). Certainly, the P.E. student-teachers must follow the curriculum content of games to ensure that they have the competence to teach these games after graduation from the Institute. On the whole, the approach that the P.E. lecturers adopt is most likely the skill-based approach in which they teach them the skills and techniques of that sport and little attention would be given to the game itself. For example, in Basketball, they teach the P.E. student-teachers ball sense, passing and receiving, bouncing, dribbling, shooting, offense and defense respectively. The reasons why they adopt this approach are as follows.

Firstly, the P.E. lecturers themselves were trained by using the skill-based approach to teach games when they were P.E. student-teachers at the College. Actually, it can be said that they were taught by adopting the skill-based approach to learn techniques in games lessons even starting from the periods of their primary and secondary education. Whenever they learned any games, they first started to practise techniques such as passing and receiving, dribbling and shooting. Eventually, they were ‘conditioned’ by their P.E. teachers that techniques were the central aim of the games lesson. Later when they were trained to become P.E. teachers, they were also taught by adopting the skill-based approach. This will give them an impression that learning techniques is the sole aim in a games lesson.
In addition, they are influenced by the national governing bodies when they attend coaching courses in which learning skills and techniques is the important task of the lesson. Little time is given to the understanding of the game and how to play the game. Following this trend, they will practise what they have learnt from the course in their schools. Obviously, they will imitate the approaches to teach skills and techniques to their children and put emphasis on learning techniques in a games lesson.

Secondly, the climate of the skill-based approach in games teaching in Hong Kong has been firmly established since the 1960s. Not only the national governing bodies advocate the importance of learning skills and techniques from which skilful players can be trained through practising techniques, P.E. inspectors and P.E. lecturers also recommend P.E. teachers to teach children to learn techniques in the games lessons. Lists of skills and techniques can be found in the P.E. syllabus (CDI, 1995). Example of skills and techniques in Badminton include

1. The grip.
2. In pair, practise long service.
3. Forehand, over-hand clear.
4. Forehand drive.
5. Half court single practice.

(Curriculum Development Institute, 1995, p.110)

As a result, many P.E. teachers in primary and secondary schools tend to adopt this approach to teach their children. In this situation, it is really difficult for P.E. lecturers to adopt other teaching approaches to train their P.E. student-teachers.

Thirdly, it is easy to quantify the student-teachers' performance with the skill-based approach (Bunker and Thorpe, 1986). Marks and grades can be given subjectively by means of the techniques criterion-referenced assessment method. The usual practice to assess the performance of the students is that the teacher sets up a list of criteria for one or two techniques in advance. Then the students are asked to perform the
techniques in front of the teacher. Results are obtained through observation. However, they would never question on the subjectivity and disadvantage of this approach.

Generally speaking, the P.E. department has no strict instructions given to P.E. lecturers on adopting what approaches to teach games. Actually, each of them, to a certain extent, exercises his or her discretion and flexibility to teach games with different approaches.

4.3 Method

A survey on the study of the approaches that the P.E. lecturers might adopt currently would unveil the current climate in games teaching in the teacher training institute. Ten, 2 female and 8 male, experienced P.E. lecturers (representing all P.E. lecturers teaching ball games in the Hong Kong Institute of Education) were invited to participate in this survey. On the average, all of them had at least 15 years of teaching experience. Four of them obtained overseas training experience in England and the rest was trained in local institutes or universities. A questionnaire (see Appendix A) was sent to these 10 P.E. lecturers who were mainly responsible for teaching games (Basketball, Volleyball, Football, Handball, Table Tennis and Badminton) in the three campuses. Before completing the questionnaire, they attended a briefing session and were given an introduction and explanation as to the purpose of this survey and the questions. After two weeks, all of them returned the completed questionnaires by hand. Each questionnaire was coded and a final summary table of all coded responses was eventually prepared for analysis.

4.4 Results

To understand the current teaching climate in games teaching in the P.E. teacher training institute and the influence of the teaching games for understanding approach on them, four questions were asked in the questionnaire and their feedback was summarized as follows.
1. Do you work closely with the Inspectorate syllabus for teaching games with skill in having a major class forms?

Eight out of the ten P.E. lecturers gave a definite answer ‘yes’. It meant that they followed the P.E. syllabus closely for teaching games with skills and techniques. Although two of them gave a negative answer, their reasons were very interesting. They did not follow the major class forms not because of adopting other modified approaches but because of environmental constraints such as shortage of time, inadequate P.E. facilities and equipment respectively. For instance, two of the lecturers reported that they would not conduct the concluding activities step when time was inadequate. In other words, they preferred to reduce concluding activities instead of not shortening the duration of time for practicing skills and techniques because they thought that this part was the central aim of the lesson.

2. Are there any other approaches that you use a little?

Although three out of the ten P.E. lecturers did not give a ‘no’ answer, the findings reflected that they still were in favour of the skill-based approach in games teaching. There was no evidence that they knew or had heard of the teaching games for understanding approach. However, it could be assumed that they adopted the skill-based approach in teaching their student-teachers how to teach games lessons.

3. Do you teach with transfer between games?

All of them reported that they taught with transfer of skills among games. Emphasis was given on the transfer of skills. They always reminded the student-teachers that the practice of passing and receiving in Basketball could be transferred to learning of Handball. At the same time the stroke skills in Badminton could be transferred to Table Tennis. However nothing was being transferred on ‘understanding’ of the principles. They did not think or become aware that ‘understanding’ of the game was very important and worth teaching student-teachers. Their reaction implied that the skill-based approach was still a dominant approach for student-teachers to learn and later to teach games in a similar way after graduation.
4. Which games do you teach your students in training? Why?

The results showed that they taught various games including Basketball, Football, Handball, Volleyball, Badminton and Table Tennis. Indeed these games were taught in each campus. Each of them was assigned to teach, at least, two to three games. On the whole, the findings on the reasons why they taught these games were (1) it was their teaching duties assigned by the section head, and (2) these games were in the P.E. syllabuses and there was a need to enable student-teachers to learn how to teach with competence after graduation.

4.5 Discussion

P.E. lecturers are the key people to give influence to any dissemination of teaching innovation. There is no doubt that the dissemination of the teaching games for understanding approach relies heavily on these key people who are in the forefront for training hundreds of P.E. teachers every year because what the P.E. student-teachers have learnt at the institute will be implemented in the schools where they teach. It is the author's impression that P.E. teachers will be receptive to any teaching innovation. From the above findings, it seems that P.E. lecturers are in favour of the skill-based approach in the institute. Maybe this is why the skill-based approach is still firmly established in Hong Kong.

Although the teaching games for understanding approach has been disseminated for 15 years, it seems there is no strong impact on the P.E. lecturers in the teacher training institute. Several implications from the findings should be considered.

Firstly, the P.E. syllabus not only serves as an important reference to P.E. teachers but also to P.E. lecturers. It exerts great influence on them. It seems that all P.E. lecturers tend to take the P.E. syllabus as a reference to train P.E. student-teachers. Understandably, this is a practical need because P.E. teachers are supposed to know how to teach the suggested content in the P.E. syllabus. To train P.E. student-teachers to become a competent P.E. teachers, the content in the P.E. syllabus must be taught.
This is supported by the finding in question 4 asking the P.E. lecturers why they teach the games. A few of them reported

I teach these games because they are in the P.E. syllabus

(Reported by P.E. lecturers)

Interestingly, this phenomenon might reflect that not only the P.E. lecturers tend to adopt the skill-based approach, the P.E. inspectors in the P.E. Inspectorate and the P.E. curriculum officers in the Curriculum Development Institute also support the skill-based approach in games teaching. It is evident that in these few years, there have been many P.E. seminars, workshops and training courses organized by them. Some of these training courses were related to teaching of games, but the approach adopted was still heavily on learning techniques. In other words, none of them were related to teaching games for understanding. For the P.E. curriculum officers, their intention to support the skill-based approach is evident in the recent revised P.E. Syllabus for Primary School, 1995 which advocates the adoption of the skill-based approach in the teaching of games. So both P.E. lecturers and P.E. inspectors are key people to be influenced by the teaching for understanding approach. Otherwise, it would be really difficult to find a standpoint from the skill-based approach climate.

Secondly, P.E. lecturers know very little about the teaching games for understanding approach. The findings reflected that they taught transfer of skills with nothing to do with the understanding of the game. For example, the students were told to transfer smash strokes in Badminton to Tennis, passing and receiving in Basketball to Handball. Yet, they did not realize the transfer of the understanding of games. They were not concerned with the importance of understanding of the games. Their concern was mainly on techniques. This might due to the lack of the suitable and appropriate channels to keep in touch with current developments in the P.E. world. One of the main reasons was that the job nature of the P.E. lecturers was to train competent P.E. student-teachers, and little attention was given to research work. Reading journals for up to date knowledge and approaches was not absolutely necessary. As a result, they would deliberately move away from the current development of the P.E. world
particularly in sport pedagogy. This would lead to inadequate attention to the development of the teaching for understanding movement amongst other things.

Thirdly, apart from their own specialized sport, all P.E. lecturers are assigned to teach other sports activities. The findings confirmed that the P.E. lecturers' teaching duties were assigned by their section heads. This arrangement might lead to the problem that when they taught their non-specialized area, they would pay little attention to the development of that particular sport. Obviously, they would just follow the usual approach or approaches to teach that game, viz. the skill-based approach. They, of course, would not challenge the disadvantages of the skill-based approach because they knew very little about the current development of the teaching approach of their non-specialized area.

With the above implications under consideration, and the need for a standpoint for the teaching games for understanding movement to be disseminated in the teacher training institute, a number of remedial measures needed to be taken simultaneously. The proposed dissemination strategy was first to influence the P.E. lecturers, then the P.E. inspectors in the P.E. Inspectorate, and also P.E. curriculum officers in the Curriculum Development Institute; in other words, to influence all P.E. professionals.

The first step to be strongly recommended is that sports specialization in teaching duties allocation to all P.E. lecturers should be top priority. For administrative convenience, the lecturers in one campus would mainly teach in that campus. However, this arrangement would lead to the present situation that each lecturer might teach his or her non-specialized games sports. For the benefit of the student-teachers, it is, therefore, suggested that all P.E. lecturers should teach in cross campus bases. Then, they could teach their specialized sport and would pay more attention to the development of that particular sport. In addition, the best means to keep in touch with the current development of that game is the accessibility and availability of journals. All P.E. lecturers should be encouraged to read the journals regularly and frequently. Apart from that, a staff development programme should also be provided including
sponsorship for attending local or overseas conference and conducting research activities.

The next step is to establish close liaison among the P.E. lecturers and the P.E. inspectors in the Inspectorate and the P.E. curriculum officers in the Curriculum Development Institute. This enhances exchange of ideas and sharing opportunities on the development of the teaching games for understanding movement and the P.E. inspectors would be eventually influenced among themselves. This leads to active involvement in the dissemination circle to introduce the teaching games for understanding approach to all P.E. teachers in Hong Kong by means of workshops, seminars or even teachers themselves to conduct action research.

It is hoped that through these dissemination strategies, not only the P.E. lecturers in the teacher training institute will be influenced but also the P.E. inspectors and P.E. curriculum officers will give their support.
Chapter Five

The Views of National Governing Bodies on
the Teaching Games for Understanding Approach

5.1 Introduction

National sports associations are the governing bodies of their respective sport in Hong Kong. Nowadays, there are about 60 national sports associations. One of the major responsibilities of a national governing body is to promote the standard of performance of athletes, train athletes, organize international and local competitions. It is the only authorized representation of that sport in that region or country. For example, the Hong Kong Amateur Basketball Association represents Hong Kong in the training of Basketball athletes to participate in international competitions.

In brief, national sports association are responsible for planning, administering and co-ordinating the overall development of their sport, organizing competitions and training courses, and for raising the performance standard of Hong Kong sport at the international level.

(Hong Kong Sports Development Board, 1996)

Training the athletes is one of its jobs and it is unquestionable that the way adopted to train the athletes is certainly a ‘technique’ dominated approach. The athletes have to practise skills and techniques in that sport to ensure that they can perform well during competitions. For instance, the Volleyball players have to spike the ball for a thousand times until they can master the skills of spiking. The Basketball players also need to practise many times of shooting to achieve a high percentage of success in shooting. At the present moment, this is a common practice for all coaches to train their athletes. Evidence can be found in the coaching manual of Volleyball (Hong Kong & Kowloon Amateur Volleyball Association, 1994) (see below).
The training programme consists of 12 lessons in which 9 of them (shaded) represent the lessons of practising Volleyball skills and techniques. The 3 lessons (unshaded) only deal with games and tactics. From the above distribution, it is not hard to observe that the Volleyball coaches are in favour to adopt the skilled-based approach to train athletes.

In England, after the introduction of the teaching games for understanding approach, debate has generated a notion of 'intelligent performance' which claims to subsume the idea of skill which has dominated our thinking in physical education for so long (Kirk, 1983). A number of national governing bodies of sports have endorsed this focus on games teaching and incorporated it into their publications. However, it seems that there is no response in Hong Kong. It is very interesting to understand how the national governing bodies feel and what their attitude or position is towards this trend. The purpose of this study is, therefore, to review the current view of the national governing bodies on the teaching games for understanding in Hong Kong.
5.2 Method

Two national governing bodies, the Hong Kong Amateur Basketball Association (HKABA) and Hong Kong & Kowloon Amateur Volleyball Association (HK&KAVA), were invited to give their views on the teaching games for understanding approach. With their secretaries consent, two sets of modified cognitive approach lesson plans (formerly practised in the pilot study) on teaching of Basketball and Volleyball (newly developed) were sent out for their comments (see appendix E & F). In the attached lesson plans, a covering note to explain the details such as the objective of this project, a brief introduction of the teaching games for understanding approach, the deadline to return the comments respectively. Serving as a reminder, a follow-up telephone call was given to these two Associations two weeks before the deadline. After four weeks, their comments were received (see appendix B) and then followed by analysis procedure.

5.3 Results

The comments returned by the Basketball Association, reflected that the Association did not accept this new approach. Amendments with techniques were given in the lesson plans. For instance, in session 1, the comment on ‘too close to the basket (under the basket)’ would create ‘in a bad angle of shooting’; In session 2, another comment was that ‘don’t develop the habit of drilling once before passing or shooting’ (see appendix B). In addition, a coaching manual prepared by the Basketball Association was also attached together with the comments to highlight the emphasis of the skill-based approach adopted by coaches to train Basketball athletes. The detail was summarized as in Table 4 (p.79).

From the coaching manual for Basketball (HKABA, 1993), it gave an impression that there were 6 (shaded) out of 8 lessons could be categorized as putting emphasis on technique training. Such distribution of content in the training programme indicated that the coaches of the Basketball Association showed no intention to make any change and that they would even stand firmly to adopt the skill-based approach to train their Basketball athletes in the future.
Similarly, the comments from the Volleyball Association gave an impression that the Association was strongly inclined to adopting the ‘techniques’ dominated approach.

Although an excellent problem has been raised for the children to think and work for solving it, children still need a period of time to grasp a minimum level of basic skills before going further.

(HK&KAVA Coaching Committee, 1994)

However, it was agreed that both the teaching games for understanding approach and the skill-based approach were not mutually exclusive and the children would find the game more interesting and enjoyable when adopting the teaching games for understanding approach;

As I conclude both the teaching games for understanding approach and the skill-based approach are not mutually exclusive. The teaching games for understanding approach facilitates the awareness of the contextual nature of the game while the skill-based approach back up the enjoyment and satisfaction in playing of the game by means of perfect skills performance.

(HK&KAVA Coaching Committee, 1994)
With the above findings, there was an impression that the Volleyball Association were more willing to recognize the benefits of this approach. They believed that only after achieving a certain level of skills could children (and adults) obtain enjoyment from the game.

5.4 Discussion

From the findings, the Basketball Association were biased to practise skill and techniques (Table 4, p.79). On the other hand, the Volleyball Association indicated that though they put emphasis on skills and techniques, they also recognized the benefit of the teaching games for understanding approach (see Appendix B).

It is not strange to obtain such findings because both national governing bodies think that skilful players are trained by learning techniques. Through practising numerous times of shooting in Basketball and spiking in Volleyball, the athletes master the techniques and become more skilful. It seems to them that the skill-based approach has worked for many years. That is the reason why nowadays both Associations still put emphasis on learning techniques as the central aim of their training programme. Examples can be found in the Basketball coaching manual (HKABA, 1993). The main objective of a training session is to learn techniques like passing, dribbling, shooting respectively. The coaches never question the effectiveness of these training methods. However, the problem really exists among the Basketball players.

In fact, the real problem is that though the Basketball players can perform amazingly on dribbling the ball and shooting the basket before the game starts. Their performance is entirely different during the game. Since the game situation is dynamic and unpredictable, the players do not have adequate time to decide when to shoot, how to pass or even where to move to an appropriate area. Although they perform well in techniques, most of them fail to make appropriate responses during the game. The main underlying problem is due to the over emphasis on learning techniques. Eventually, the importance of cognitive training on making appropriate decisions is ignored. As a result, the players are technical players but not skilful players at all. In
order to train skilful players, the teaching games for understanding approach can strengthen the existing weaknesses by providing numerous opportunities to improve the players' decision making skills during games situation. Obviously, the teaching games for understanding approach can serve as an alternative for training athletes.

Like the Basketball Association, the Volleyball Association lean heavily on learning techniques in their training programmes (Table 3, p. 77). However, they claim to recognize that the teaching games for understanding approach can facilitate 'the awareness of the contextual nature of the game'. At the same time, the skill-based approach can supplement the enjoyment by means of skilful performance. To a certain extent, it is true. However, it reflects that they do not understand the real benefits of teaching games for understanding, since enjoyment from the game does not come only through skilful performance. Bunker and Thorpe (1986) stated that children could enjoy the game even they were not skilful. The most important element to enjoy the game is to understand the game.

Simply if children do not 'understand' the game they can't select appropriate responses and so they must follow prescribed instructions which tell them what to do for a given situation, but if this occurs the interesting elements of the games are lost.

(Bunker & Thorpe, 1986, p. 28)

In other words, the enjoyment for children in participation in the game is from the game itself. Teaching games for understanding can achieve this objective while the skill-based approach shifts away from the game to learning techniques. Although the Volleyball Association claim that they recognize the benefits of teaching games for understanding to children, they have not been able to identify the usefulness of the teaching games for understanding approach to train athletes.
Chapter Six

The Current Games Teaching Approach in Secondary Schools

6.1 Introduction

Games is a major area in P.E. curriculum. In 1982, a new games teaching approach, teaching games for understanding, was initiated by two P.E lecturers, Bunker and Thorpe, at Loughborough University, England during the late 70s and early 80s (see Figure 1, p.21). In Hong Kong, however, it seems that there is no tendency in games teaching towards adopting this new direction. The current approach in games teaching is heavily biased to skills and techniques. It is evident in the P.E. syllabus (CDC, 1988) which suggests a series of techniques to be taught in games lessons. For instance, in Badminton, the suggested skills and techniques are long service, overhead clear, forehand drive, respectively. As mentioned in Chapter Two (section 2.2, p.19), Bunker & Thorpe (1986) identified that such an emphasis will lead to several weaknesses for the children being taught. For example, the children know very little about the games, achieve little success in the games and fail to utilize ‘cognitive’ processes.

To the benefit of the children, the introduction of the teaching for understanding approach to Hong Kong promises to be a completely new and challenging direction for current practitioners. This survey aims to provide a more reflective climate for the teaching of games in Hong Kong, as a preparation for the process of introducing a different approach. As a first step the study seeks to understand the teaching approach or approaches P.E. teachers use during games lessons in schools; how they feel about the innovation and if they would accept change.

In Hong Kong, there is very little local literature on games teaching. Most of it is imported from the Western world. With a strong influence from Britain and U.S.A, games teaching in Hong Kong is leaned heavily towards the skill-based approach. The games lesson is highly structured with emphasis on the teaching of techniques. Evidence can be found in P.E. syllabuses for both primary and secondary schools.
As mentioned earlier (Chapter Three, section 3.6, p.65), in the syllabus of ‘A Scheme of P.E. for Hong Kong Primary School, 1964’ a game lesson is structured with the following steps (1) Opening activity, (2) General activity, (3) Games & (4) Order activity. All materials taught in each step are mainly centred on techniques which are the central aim of the lesson, the games serving as a vehicle for the techniques.

After thirty years, the teaching strategy in games lessons remains unchanged. This gives the impression that the teaching of techniques is in the commanding position. For upper primary classes, the syllabus recommends that the teaching materials of games should be more demanding in techniques (CDI, 1995).

From the above, it is not difficult to understand that games teaching in Hong Kong is strongly influenced by Britain and U.S.A. In fact all P.E. teachers have adopted the skill-based approach to teach children games since the 1960s. The reason is that many P.E. professionals and key people in the P.E. Section of the Education Department are from Britain. It is likely that they had a strong influence on these formulating the P.E. policy and planning and developing the P.E. syllabuses. At the same time, many local P.E. lecturers and teachers trained either in Britain or in the U.S.A. As a result, the approaches presented in Britain and U.S.A. will be learnt and adopted; it is, therefore, difficult to reject the skill-based approach in games teaching.

6.2 Method

A survey was conducted to investigate what teaching approach or approaches P.E. teachers use during games lessons at schools; how they feel and if they are about to accept change. In 1993-1994, there were 562 secondary schools in Hong Kong and 63 of them were private, commercial or international schools which had different curricula. A questionnaire (see Appendix C) with 6 questions was sent by means of random sampling method to 170 secondary schools representing 1/3 of all secondary schools in Hong Kong. Firstly, a school list of all Hong Kong secondary schools was ranked in alphabetical order. Each school was assigned with a number. As mentioned above, 63 of them who were not appropriate for this project, were
identified and discounted. Then the rest was put in a table with six columns in which each column was named from number 1 to number 6. After completing the table with all school numbers, a dice was used to select the samples. Based on the number shown on the dice, the sample school was decided. This process would be finished after selecting 170 secondary schools. To follow the schedule, a second reminder was sent out to the non-response schools when the deadline was over. As a result, 75 out of 170 secondary schools with a total number of 155 P.E. teachers (44.12% of the total number of schools) returned the questionnaires. They were distributed in Hong Kong Island, Kowloon and New Territories.

6.3 Results

1. Do you still use the approach you were taught at College for games teaching, i.e. warm-up, skill practice, games and cool down?

144 P.E. teachers, representing 92.9% of the total number of P.E. teachers, gave a 'yes' answer. This implies these P.E. teachers still adopted the skill-based approach in games teaching, that they teach what they have learnt at the Training College. They seem never to question the approach or consider the problems arising from it. Undoubtedly, teaching skills and techniques are the central aim of their lessons.

2. Are you aware of any other approach/es to teaching of games, e.g. teaching games for understanding; inner games, etc.? If yes, please state.

When the P.E. teachers were asked if they were aware of any other approach to the teaching of games, a very high percentage (81.3%) of P.E. teachers reported themselves unaware of any other approaches in games teaching. This is not strange because there is a climate, firmly established in Hong Kong, of adopting the skill-based approach in games teaching. Among the 29 P.E. teachers giving a 'yes' answer, eight of them clearly stated that they were aware of other approaches to the teaching of games. For instance,
I often use the question and answer strategy to teach students in playing Basketball, e.g. 'How do you pass the ball when the opponent’s hands are up?'

and

Emphasis is on fun making and interest arousing in learning the games rather than just teaching them skills and techniques.

(Responses from P.E. teachers)

From the high percentage reporting 'no', there is no question that the skill-based approach has formed a cornerstone in games teaching in Hong Kong.

3. Have you changed the way you teach games since leaving College? If yes, please state.

Although in question one, 92.9% of the P.E. teachers reported that they followed the approach taught at the College, they explained that they made modifications in the teaching approach after their graduation. 33.6% of the sample reported that they had changed their methods in games teaching. However, most of their changes are due to environmental factors and not in the teaching approach itself. The environmental factors include shortage of time, inadequate facilities, difference of students’ abilities and large number of students in one class. For instance, some teachers expressed that under time constraint, they changed their teaching approach by dividing the class into six small groups to practise techniques and games throughout the whole lesson while some teachers allowed children to play athletics activities during games lesson when the equipment and facilities were inadequate. On the other hand, some of them even reflected that it was necessary to repeat some of the techniques since the girls found them difficult to learn.

4. Do or did you have any difficulties in using the skill-based approach to teach ball games? If yes, please state.

108 out of 155 P.E. teachers gave a 'no' answer. This shows that 69.6% of P.E. teachers had no difficulty in adopting the skill-based approach in games teaching. On
the other hand, 47 P.E. teachers (30.4%) stated that difficulties were found from the students and the teachers themselves. They found that the students

a. lacked interest in learning skills and techniques in the games lesson.
b. had difficult in learning because of their different abilities.
c. were unable to give appropriate responses in the game.

At the same time, the teachers themselves were also aware of the difficulties arising from adopting the skill-based approach. They reported that

a. they had spent a lot of time to teach skills and techniques and little time was given to the games.
b. there was no real games situation provided to the students.
c. technical approach might not attract students because they wanted fun only in the games lesson.

5. Have you any other comments about games teaching? If yes, please state.

As expected, the majority of P.E. teachers did not make any response. 33 of them (21.2%) gave quite a number of constructive and supportive comments about games teaching. They felt that:

a. games teaching should be fun-oriented.
b. games and tactics should be emphasized and introduced earlier.
c. the students found difficulties to integrate skills into the games situation by using the skill-based approach.
d. references about different approaches in games teaching were inadequate.
e. the total number of students in one class was too large and the playground was also too small to accommodate 40 students.
All these comments truly reflect the real situation in adopting the skill-based approach in all secondary schools. It is very interesting to note that one of the respondents was aware of a lack of relevant references about different approaches in games teaching. This issue is really a vital concern.

6 (a). Would you like to know more about a different approach to teaching of games like teaching games of understanding in which the game and the tactics of the games are central in the lesson?

A high percentage (87.1%) of P.E. teachers showed an interest in knowing more about a new approach. This figure reflects that a large number of P.E. teachers who were formerly in favour of the skill-based approach are eager to know more about the new approach and how it works.

6 (b). Would you like to know the results of this questionnaire?

117 out of 155 P.E. teachers (75.4%) showed interest in the results of this questionnaire. It is obvious that many of them had shown interest in knowing more about the new approach in the previous question and they naturally would like to know about the results of this questionnaire.

From the results of the questionnaire, there is a general impression that a large number of P.E. teachers are still teaching their students a skill-based approach in a games lesson. They receive no message of any changes in teaching approaches, not because they do not want to change but mainly because they have no access to such information.

6.4 Discussion

In Hong Kong, nearly 95% of the P.E. teachers are graduates from one of the three Training Colleges (Northcote Training College, Grantham Training College and Sir Robert Black Training College). Before they become P.E. teachers, they undergo a P.E. training programme for either two years or three years depending on their entry
requirement. Those who have completed A-level examination enter the two-year course while those who have completed GCSE take the three-year course.

Although these three Training Colleges had their own campuses, the course structure is more or less the same. The student-teachers are required to complete four areas of the course structure, namely professional studies, elective studies, general studies and practical teaching. Physical education is one of the electives in elective studies. According to the Handbook (1993-1994), the synopsis of P.E. is as follows.

The course is designed to prepare students to teach P.E. at primary and secondary school levels. Theoretical Studies include foundation of P.E., administration, curriculum and programme planning, teaching methods, anatomy and physiology skill acquisition, physiology of exercise, biomechanics, training methods and safety management. Strong emphasis is placed on personal proficiency in aquatic, athletics, dance, games, gymnastics and outdoor pursuits. Opportunities will be provided for students to attend courses, obtain awards offered by national sporting bodies and to be involved in forms of community service which involve athletics, aquatics etc. They are particularly advised to obtain a First Aid certificate, Bronze Medallion in Life Saving, and elementary Bronze Proficiency Award in Trampolining.

(Grantham Training College, 1993, p.15)

According to the synopsis, there are two important points to note in games. Firstly, the student-teachers have to learn how to play and how to teach games. From the findings in Chapter Four (section 4.5, p.72), they are taught by P.E. lecturers in favour of the skill-based approach. Secondly, they are encouraged to attend games courses offered by national governing bodies, the coaches of which emphasize skills and techniques of that game. This implies that the student-teachers are strongly influenced by their P.E. lecturers in the institute as well as the coaches of the national governing bodies and eventually indoctrinated with the skill-based approach to teach games in their future.
From the previous findings, it is well understood that the majority of P.E. lecturers are in favour of the skill-based approach in games teaching. What happens then to the P.E. teachers in schools? It is very interesting to know how they work and what approach they adopt currently.

Although teaching games for understanding has been disseminated from England to other countries for nearly 15 years, it seems that it has had little or no impact on the P.E. lecturers or the P.E. teachers in schools. The findings show that 92.9% of the P.E. teachers still adopted the skill-based approach in games teaching and 81.3% of them had not heard of any other approaches. These figures reflect that the skill-based approach is firmly established in Hong Kong. Making the road ahead for introducing teaching games for understanding to Hong Kong becomes more difficult. However, a constructive solution to find a standpoint for teaching games for understanding in Hong Kong is indispensable and we should look into the roots of the problem.

Inevitably the above outcome was expected because P.E. teachers are trained at the Training Colleges to teach games by adopting the skill-based approach. In addition, they are influenced by national governing bodies. In real life, the P.E. teachers serve dual roles in schools where they are P.E. teachers as well as coaches for a particular sport. To improve their know-how in a game, they attend training or coaching courses organized by national governing bodies and what they learn is teaching techniques.

In addition, since the P.E. inspectors and P.E. curriculum officers support the skill-based approach, P.E. teachers will be advised to adopt the skill-based approach in games teaching.

However it is interesting and encouraging to find that 47 out of 155 P.E. teachers (30.4%) found difficulty in adopting the skill-based approach. Some P.E. teachers and their students were not happy with this approach. In general, the students expressed the view that they had difficulty in learning the techniques resulting in loss of interest in the game. The P.E. teachers felt also that they taught techniques instead of the games to their students. Actually, little time in one lesson was given to games situations. It
was, therefore, impossible for the students to understand how to play the game. The above reflections are similar to Bunker and Thorpe's finding (1986). Why don't they ask for change? In reality, their voice is too little and they cannot arouse the attention of P.E. authorities. At the same time, the adoption of the skill-based approach climate is so strong that no P.E. teachers dare to challenge it. Even so they are ready to accept innovation when a new and useful approach is introduced. It is evident from the findings in question 6 that 87.1% of the P.E. teachers showed interest in learning more about this innovation. This finding serves as a strong and constructive injection to find a starting point for teaching games for understanding in Hong Kong. When more P.E. teachers show interest in learning more about this new approach, it obviously hastens the speed of dissemination. This reaction implies that more teachers are ready to learn about teaching games for understanding.

It now seems that the climate to introduce teaching games for understanding to Hong Kong is favourable, but there are two crucial technical problems to face and tackle in advance, and they are the inadequacy of references and large class size.

Many P.E. teachers feel that they are hindered from current development of the outside world because of the inaccessibility of the relevant journals to make knowledge and information accessible. It is true that since there are no local P.E. journals related to sports pedagogy, it is difficult for them to be aware of innovations in games teaching. In addition, the budget in each school for the purchase of references is very limited. The opportunity or priority to purchase relevant and appropriate journals is a luxury. It is recommended that the P.E. teachers should educate or influence their school principals and stress the importance of the subscription of such journals for career development and for the benefit of the students, hopefully resulting in more funds for the purchase of relevant journals.
In regard to the large class size, this is a hard nut to crack because it is an education policy for all schools in Hong Kong. Fortunately, a new policy was introduced in 1994, and the class size has been reduced from 40 to 35 starting in primary one. To sort out this problem right now, it is recommended that temporarily the existing P.E. equipment should be improved and the number of open playgrounds in school should be increased to enable the students to maximize their participation in learning.
Conclusion

The findings reported in Part III clearly show a biased towards the skill-based approach. This is supported by reviewing the P.E. syllabus, the responses of the P.E. lecturers, the directors of coaching of two selected sports and the P.E. teachers. Although the P.E. syllabus has undergone several revisions, it seems that there is no remarkable change since the 1960s. Their emphasis remains on technique learning. In the P.E. teacher training institute, there is, apparently, an impression that the current climate in games teaching among P.E. lecturers is restricted to the skill-based approach. Although a few of them reported the adoption of other teaching approaches, they actually still stand within the limits of the skill-based approach.

Not surprisingly, all national governing bodies, in general, favour the skill-based approach to train athletes. The Basketball Association and the Volleyball Association are typical. Although the Volleyball Association claim that they recognize the benefits of the teaching games for understanding approach to children, they, in fact, do not really understand and appreciate the effectiveness of this approach. However, the most pertinent and strongest evidence about the current situation lies in the evidence from the practising P.E. teachers who almost entirely adopt the skill-based approach. The results report that more than 90% of P.E. teachers still adopt the skill-based approach to teach their students in games lessons. Additionally, 1/3 of the respondents (47 P.E. teachers) is found with difficulty in using this approach. Interestingly, more than 75% of the subjects (117 P.E. teachers) show an interest in the teaching games for understanding approach. It follows that the introduction of an alternative approach might be of interest and in the author's opinion would be very necessary.
Because of cultural differences, not least the language, and because of the 'novelty' of this type of teaching a number of 'developmental' steps were necessary. This is most apparent in the need for a pilot study phase which precedes the main section. Equally as results so often inform procedure in this study results are included in this section.
Chapter Seven

The Pilot Study

7.1 Introduction

It is evident from the findings in the previous chapters that the P.E. syllabus is still heavily biased towards technique learning and many key P.E. people are adopting the skill-based approach in games teaching. It was the author's opinion that the teaching games for understanding approach would do much to stimulate thought about games teaching but the problem was to develop an approach which would be appropriate for Hong Kong.

With the support of the P.E. staff and permission from the College authorities, a two-year pilot study was planned and implemented. The main objective was to develop lesson content and to investigate the feelings of student-teachers to this new approach. There were three crucial principles to bear in mind: (1) the teaching games for understanding should not override the existing approach but be placed alongside it; (2) the selected games to be taught by the student-teachers should be common and popular; and (3) the student-teachers could teach with competence. There was little doubt that if considerations were not given to these principles, no one would follow this new approach or support it.

7.2 Method

Bearing these principles in mind, Basketball was chosen as the sport to be taught by the student-teachers because it was one of the most popular games in Hong Kong. Since each school had its own basketball court, there should be no problem with playing space. Using the existing lesson plan format at the College, a modified 6 x 1 hour lesson plan of Basketball was carefully prepared and developed. On the whole, it was a cognitive approach but with modifications to fit the teaching culture of Hong Kong.
The author had introduced all second year student-teachers to the games for understanding approach. Ten second year Basketball team players (5 male / 5 female) were identified and one male and one female randomly selected to offer a teaching games for understanding unit of work in their teaching practice. They had also been trained to adopt the skill-based approach to teach Basketball. (Both students were felt to be confident as teachers and comfortable operating in this sport).

Before implementation, a one-day workshop was arranged to ensure that the two student-teachers understood how to teach with the new approach. The P.E. staff were also invited to supervise and give comment on their performance. A questionnaire (see Table 5 p.96), with 5 questions, was prepared to elicit information after the workshop and during the implementation of the teaching games for understanding approach.

The following year, the same procedures and similar lesson plans, adapted slightly for age, were repeated by the same student-teachers in two primary schools during their teaching practice (see Table 6, p.96). In addition to the student-teachers feedback, a study on how the pupils enjoyed the lessons was included. Twenty pupils were randomly selected from two name lists by using a dice to undergo a brief interview in which they answered five questions (see Table 7, p.97).

7.3 Results

The pilot study allowed the author to observe and discuss the appropriateness of the approach as designed but also supplied more specific information.
The results reported that both student-teachers felt happy and comfortable with the workshop from which they could build up their confidence in teaching with the teaching games for understanding approach. Obviously, it might reflect that the workshop was really important to them. They learned what teaching games for understanding was, the development of teaching games for understanding and its implementation. Questions were welcomed. Interestingly after only a short introduction, they found no difficulty which could not be resolved for their teaching.
In regard to their view on the benefit of teaching games for understanding to pupils, two student-teachers agreed that the teaching games for understanding was good and beneficial to pupils. Although they were trained to adopt the skill-based approach to teach ball games, they realized that there were weaknesses in the skill-based approach after attending the workshop. They believed that by adopting the teaching games for understanding approach, the pupils would know how to play the game tactically and happily. Through this learning process, their cognitive thinking would also be well developed and functioned.

It was encouraging that the pupils enjoyed the lesson with the new approach. Such findings would support both student-teachers' reflection on the benefit of the teaching games for understanding to pupils. Results of the questions are given in Table 7.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the lesson?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Did you feel the lesson was difficult to follow?</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>3. Could you answer your teacher's questions?</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>4. Did you know how to play the game?</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>5. Did you know how to react properly in the game?</td>
<td>14</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 7: Pupils' responses after the lessons with a new approach in primary school.

Eighteen out of twenty pupils (90%) expressed that they enjoyed the lesson, 80% and 70% of them knew how to play the game and how to react properly in the game. Interestingly, sixteen out of twenty pupils (80%) could answer teachers' questions. In addition, more than 70% of them also reported that they had no difficulty in following what the student-teachers did during the lessons.
7.4 Discussion

Having spent one year at Loughborough University exploring the teaching games for understanding approach, it was evident to the author that this new approach would be beneficial not only to teachers but also to children in Hong Kong. Since Hong Kong had a different culture from Britain, the issue was to find a ‘minimal’ approach to introduce the ideas. The procedure selected would seem to suffice. The student-teachers reported that they felt comfortable with the workshop and enjoyed the lessons because there was no remarkable change of lesson plan format and the choice of Basketball as the game to be taught in the experiment was appropriate. In short, the workshop was well-received and fruitful to them.

Firstly, the student-teachers understood that they could adopt the new approach in the original lesson plan format. However, modification of the phases was made, most notably ‘Skill practice’ was changed to ‘Games development’. There was no doubt that although the teaching approach was different, the original lesson plan format made them feel comfortable. Not surprisingly as the teachers were confident and experienced in Basketball, they reported they were able to concentrate on the new approach.

The student-teachers valued understanding the theoretical background as well as the method of implementation of the new approach in details. A comprehensive and clear picture relating to the teaching games for understanding approach was reviewed. They became aware of the different emphasis between these two approaches. Moreover, because teaching games for understanding was new to them, they paid more attention to it. With all these favourable conditions, they reflected that they enjoyed the lesson and gained confidence in the approach. Clearly ‘novelty’ might add to interest.

However, in interview they expressed that they had difficulty with the approach due to very practical issues, including inadequacy of grounds and P.E. equipment, and too many children in one class. Certainly, these limitations and difficulties were expected because in a real school situation, the available area for the P.E. lesson was one Basketball court with one pair of Basketball stands to accommodate 40 children. The
children were congested within the court and they had very limited space to play games and it was impossible for them to move freely. At the same time, the inadequate provision of Basketball stands would also minimize the children’s participation in the game.

Another difficulty was that the student-teachers needed to teach with a new approach with which they were not so familiar. They needed to think how to ask questions and respond and to help individuals appropriately. It was not unexpected at all to get this feedback from the student-teachers. However, we should be aware of these practical problems in teaching with this new approach in the main experimental design if the effectiveness of the teaching games for understanding approach is to be maximized. In other words, modifications like more Basketball stands should be provided to allow more children to participate in the game situations.

In response to the question on children’s reaction during the lesson (see Table 7, p.97), the student-teachers felt that this approach was good for children. From their observations, they found that the children were ready to learn the game itself. They tended to react properly in the game situation through learning tactical awareness. Apart from that, a high percentage of children also expressed that they found no difficulty in learning with this new approach. They could learn at their own pace and the sense of success and satisfaction could be more easily achieved. That might be the reason why they reflected that they enjoyed the lesson with the new approach. Their reflections are matched with Bunker & Thorpe’s (1986) concern on the advantages of teaching games for understanding to the children.

Our contention is that each game situation poses a problem and that all children whatever their physical ability can enjoy the pleasure of solving the problem using their bodies as skilfully as possible.

(Bunker & Thorpe, 1986, p.26)
7.5 Conclusion

With such encouraging findings from the student-teachers and pupils, it can be concluded that the pilot study provide a foundation on which to plan the main experimental design in this project. The student-teachers indicated that they enjoyed and felt comfortable with the new approach. Furthermore, the pupils also reflected that they learned happily and knew how to play the game tactically and intelligently. This might imply that although the current climate in games teaching was the skill-based approach, an attempt to introduce teaching games for understanding into Hong Kong would be well received.
Chapter Eight

Procedure

8.1 Introduction

Procedure is a means to solve the problem in a project. Through procedure, the framework of an experiment is organized and the strategy for tackling the problem is formulated and developed. By means of collecting feedback from P.E. lecturers in the teacher training institute, national governing bodies and P.E. teachers in schools, the current climate of games teaching in Hong Kong has been reviewed and identified. The findings serve as a background knowledge or foundation to direct the ways of formulating the main experimental design of this project. Furthermore, a pilot study has been made also to facilitate the formulating process and numerous technical problems have been encountered and solved throughout the process. In fact, this arrangement has provided better opportunities to identify the procedural problems in order to design a solid and effective project and to achieve the purpose of this study. This chapter is intended to outline the chronological procedure of the experimental design used in this project, including the definition of terms, the selection of sports activities and subjects, measurement tool, the lesson plans, the workshop, the main and second trials teaching, the follow-up interview, the analysis of data and the assumptions and limitations.

8.2 Definition

1. The Teaching Games for Understanding Approach (TGFU)

This was a new approach in games teaching and was initiated by two P.E. lecturers, Thorpe and Bunker at Loughborough University in 1982. A model was proposed to explain what teaching for understanding was (see the model in chapter two Figure 1, p.21). This approach started with a game and its rules. The emphasis was on tactical awareness and decision making. Through this approach, children would understand how to play the game and learn with enjoyment and according to their ability.
2. The Games Centred Games Approach

This was another name for the teaching games for understanding approach. It was proposed by Almond in 1984 who viewed that the name, teaching for understanding did not illustrate exactly this movement. He preferred to use it because it gave the desired emphasis to the game as central to the whole process.

(It has been argued Thorpe that teaching games for understanding indicates the philosophy of the approach. Games centred games indicates the structure of the approach.)

3. The Cognitive Approach

'Cognitive' refers to an approach very similar to teaching games for understanding but not as exactly described by Thorpe & Bunker, in that teachers were supplied with far more questions to lead the children to a more predictable outcome than might be expected in the teaching games for understanding approach. Nevertheless the teachers were shown how to engage their children in thinking about the games they play, hence the use of the 'cognitive' to contrast with the typical passive process in Hong Kong P.E. lessons as perceived by the author. This approach was adopted in the second trial teaching of Volleyball in this project (see Appendix G).

4. The Modified Cognitive Approach

This is a further modification used in the main trial in that it contains quite direct information about the game and about skills in the game. Even so, for Hong Kong the lessons allow children far more freedom of thought. Based on the teaching games for understanding model, lesson plans of Basketball and Volleyball (see Appendix E and F) were prepared but these lessons were modified directly from teaching games for understanding by providing more formal structure and more content than the normal teaching games for understanding approach to ensure Hong Kong teachers should feel comfortable.
5. The Skill-based Approach / The Technique-based Approach

This was a popular approach in games teaching and had been adopted since in 1960s. The characteristics of this approach was that teaching of skills and techniques was the central aim of a games lesson. For example, it was very usual for all children to be taught how to perform 'correct' hand position, dig the ball in a shorter distance, increase the digging distance, move to the right and left before digging. The usual procedures in a lesson included Introductory activity, Skill practice, Games and Concluding activity. A series of techniques were taught during Skill practice phase (see Appendix E & F).

6. The Traditional Approach

It is a term often used to refer to the skill-based approach because it had been used for so many years in games teaching and has become a traditional method to teach games. In this project, it was used in the main trial teaching of Basketball and Volleyball (see Appendix E & F).

7. The Main Trial Teaching

This was the main experimental design of this project. In this trial, 8 P.E. teachers who were divided into two groups of four, would teach students Basketball and Volleyball with two different approaches, namely, the modified cognitive approach and the traditional approach. Responses from the P.E. teachers and students would be collected for analysis.

8. The Second Trial Teaching

Apart from the main trial teaching, an additional trial, teaching Volleyball in a cognitive approach, was conducted. The design for this follow-up trial teaching Volleyball with the cognitive approach was to compare the teachers' and students' feelings among three different approaches, i.e. the traditional approach, modified cognitive approach and cognitive approach.
8.3 Selection of Sports Activities and Subjects

In the P.E. syllabuses for primary and secondary schools (1985 & 1988), several games activities like Basketball, Football, Volleyball, Handball, Badminton and Table Tennis, are included. These are the sports activities to be taught by P.E. teachers in their primary and secondary schools. However there may be exceptions due to the inadequacy of sporting ground and P.E. equipment.

The syllabus is suggested for schools with adequate ground facilities, adequate time allocation to P.E. and fully qualified P.E. teachers. Though school with inadequacy in any or all these aspects are not expected to follow the syllabus rigidly.

(Curriculum Development Committee, 1988, p.16)

Practically, a few of them such as Football, Handball, Badminton and Table Tennis may be taken out of the list due to the inadequacy of ground and P.E. facilities to accommodate 40 students to play at one time. In Hong Kong, the most popular games are Basketball, Football and Volleyball. These team games are recommended as the common core sports activities in the P.E. syllabus for secondary schools.

As Basketball, Football and Volleyball are the most popular games in Hong Kong, P.E. teachers are advised to pay special attention to them.

(Curriculum Development Committee, 1980, p.61)

Normally, a school should have a Basketball court and a covered playground or multi-purpose assembly hall for P.E. lessons. With such limitation of grounds, it is not surprising to imagine how congested it would be to accommodate two classes of 80 students to attend P.E. lessons concurrently. In addition, there are about 2 to 4 Table Tennis tables in each school. Obviously, quite a large number of students have to wait when they attended the Table Tennis lesson. These practical difficulties have been reflected by the student-teachers in the pilot study. Special attention should be given to the selection of sports activities for the main project.
With the popularity of games and consideration of the inadequacy of grounds and P.E. equipment of other sports activities, Basketball and Volleyball were finally selected as activities to be taught by P.E. teachers in this project. Comparatively, these two sports activities are more appropriate than the others because of the adequacy of facilities and P.E. equipment since the Basketball stands and the Volleyball nets can be modified by means of rattan loops and ropes. This would enable more students to participate in the games at the same time.

Eight secondary school P.E. teachers, 4 males and 4 females, were randomly invited by means of a stratified sampling method to take part in this project. The first step was to table four different graduates' telephone lists with one, two, six and seven years of teaching experience and then circle all the names of male and female teachers whom were either Basketball or Volleyball College team members. The next step was to phone them in the order from the first, the last and the middle of each telephone list. There would not be any second call if one teacher was out. The opportunity would be given to another teacher. Through this procedure, all required number of teachers were identified. Four of them (2 males and 2 females) would teach Basketball and the other four were assigned to teach Volleyball. Among the four in Basketball, two P.E. teachers were categorized as experienced teachers and the other two were classified as inexperienced teachers. This categorization was also applied to the Volleyball group. Details can be referred to Figure 2 (page 109). The experienced P.E. teachers have had 6 to 7 years of teaching experience while the inexperienced teachers have had only 1 to 2 years of teaching experience. Apart from their teaching experience, their favourite sports were Basketball and Volleyball and they reported that they had adequate competence to teach these sports with the skill-based approach.

Twelve classes of 420 male and female secondary schools students participated in this project: 280 of them took part in the lesson with the modified cognitive approach while 140 students were taught with the cognitive approach (see Figure 3). On average, each class consisted of 35 students. Taking into the account the advice from two student-teachers in the pilot study, it was necessary to make an arrangement which would enable the students to move more freely in the playground. The 8 teachers
were asked to select a ‘typical’ convenient class in the age range 12 to 14 years. Teachers were aware that comparisons between approaches rather than between schools were the key factors to ensure they did not choose ‘atypical’ classes.

8.4 Measurement Tool

At the present moment, the teaching games for understanding approach has proved workable in games teaching. The effectiveness of this new approach has been supported by various studies (Lawton, 1989; Turner et al, 1992) in which their emphasis is on the ‘understanding’ and ‘improvement of techniques’ aspects. This trend has also been followed by the researchers in U.S.A. for nearly ten years. To move away from this trend, the measurement tool in this project is to investigate the ‘affective’ aspect of 8 P.E. teachers and 420 students. This direction of investigation has become one of the unique attributes of this project. It is very interesting to study students’ feelings and degree of enjoyment from the lessons. Fundamentally, it is very important to understand whether they enjoy the lessons or not. If they do, it will be easier to introduce and disseminate this new approach in Hong Kong.

Two questionnaires (see Appendix H & I) were designed for measuring the ‘affective’ aspects of P.E. teachers and students. With adequate reliability ($r=0.85$ and $0.96$), the content and format of the questionnaires were based on two articles by McAuley; Duncan & Tammen (1989) and Kendzierski & Decarlo (1991). As in McAuley, et al., the questionnaire for measuring P.E. teachers’ feeling included four dimensions, namely, Interest-enjoyment dimension ; Perceived-competence dimension ; Effort-importance dimension and Tension-pressure dimension. In each dimension, three (3) questions were asked. The students’ feeling was measured in a more simple way and the focus was on the ‘enjoyment’ of the lesson in that approach. The Likert 7-point scale format was adopted for collecting the data. To suit this project, the questionnaire for teachers was slightly modified which did not affect any reliability and validity from the original. For example, the word “playing” was changed to “teaching” and the word ”Basketball” was changed to “game”. At the same time, the student’s questionnaire was translated into Chinese to enable the students to understand the
meaning. To ensure the questionnaire retaining its integrity, three experienced, well-qualified Chinese/English speakers were invited to review the translation. Their views were found in Appendix J.

8.5 The Lesson Plans

There were three sets of lesson plans in which 5 units of work were prepared for this project. Lesson plans were prepared by the author in consultation with the pupils and teachers who had taken part in previous workshops and pilot studies. Each unit of work consisted of a 6 x 1 hour lesson plan. All the lesson plans were the teaching materials provided for P.E. teachers to teach their students. The principle was to control the teaching material variable in order to minimize the effect on two different approaches. The first set consisted of 1 unit of Basketball and 1 unit of Volleyball lesson plans which were prepared with the traditional approach. They were taught with the emphasis on skills and techniques. In Basketball, the skills and techniques included passing and receiving, bouncing and dribbling and shooting while others like underhand digging, serving, spiking and blocking in Volleyball would also be taught.

Apart from the traditional approach, the second set of lesson plans of 1 unit of Basketball and 1 unit of Volleyball were prepared with the modified cognitive approach. They were derived from the teaching games for understanding approach but modifications had been made to suit the culture of Hong Kong (see Appendix E & F). The lesson started with several steps such as Introductory activity → Individual / Partner's work → Competition → Concluding activity. Such modifications did not distort the ideology of the new approach and retained the 'cognitive' and 'tactical awareness' elements as the central aim of a lesson. Skills and techniques were to be taught if required.

The last set was 1 unit of Volleyball lesson plan (see Appendix G). It was prepared with the cognitive approach and enabled a comparison to be made between the modified cognitive approach and the traditional approach. The intention was to investigate to what extent P.E. teachers and students felt this cognitive approach. The
questions like 'How did they feel about the modified cognitive approach and the cognitive approach?', 'Could they incorporate the teaching games for understanding ideas into their teaching?', 'How would they accept it?' should be answered from the findings.

8.6 The Workshop

Before the teaching experiment commenced, a two-day workshop was organized for the 8 secondary schools P.E. teachers. In the workshop, they were briefed with

a. the current climate in games teaching
b. the drawbacks of the skill-based approach.
c. the introduction of the teaching games for understanding approach.
d. the purpose of this project.
e. the introduction of the experimental design.
f. the implementation of Basketball and Volleyball lesson plans with the cognitive approach.
g. demonstrations.

A questionnaire was given to them after the workshop for collecting their impressions and feelings on this new approach (see Appendix D).

After completing the main trial of teaching, the four Volleyball group P.E. teachers, were invited to attend another one-day workshop. This time, the implementation of the cognitive approach to the teaching of Volleyball (second trial) was introduced. Following that, the same questionnaire was also issued for collecting their feedback on this approach. Comparison between the data from these two workshops would be made subsequently.
8.7 The Main Experimental Design

The experiment was designed with two trials of teaching. In the main trial teaching, the 8 P.E. teachers were divided into two groups, consisting of one Basketball group and one Volleyball group. In each group, they would teach the assigned activity with two different approaches, the modified cognitive approach and the traditional approach (see Figure 2). For example, the four P.E. teachers in Basketball group would teach their students to learn Basketball with two different approaches alternatively. The order effect would also to be considered. One teacher would teach with the modified cognitive approach first and then followed by the traditional approach, while the other would teach with a different order, i.e. starting with the traditional approach and then following by the modified cognitive approach. After completing a 6 x 1 hour lesson plan, both P.E. teachers and students were invited to fill in two different questionnaires for collecting their feelings and level of enjoyment with that approach.

**Figure 2:** The experimental design for the main and the second trials teaching.
With one week short break, the P.E. teachers would start to teach the same assigned activity with another alternative approach. Questionnaires for both P.E. teachers and students were also given for collecting data. Consequently, they should have completed two sets of questionnaires for two different approaches (see Appendix H & I).

The second trial teaching involved the same group of Volleyball P.E. teachers. This time, they would teach another 4 classes of students to learn Volleyball with the cognitive approach. Just as in the main trial, both P.E. teachers and students completed the questionnaires for collecting data.

8.8 The Follow-up Interview

After attending the workshop and one year of experimental teaching, the eight PE teachers were, again, invited to undergo a follow-up face-to-face interview to study their feelings and progress on the teaching games for understanding. In advance, they were informed of the details of an interview including the objective of the interview, the name of the interviewer, the questions to ask, the recording procedure, and the duration of the interview. With their consent, an appropriate date and time was decided to arrange an interview with them.

The interview was conducted by the author and several self-practice sessions were arranged before the interview to become familiar with the questionnaire and to follow the question wording and question order exactly. On that day, the author visited the teacher in his/her school. The interview was started with three parts, the openings, the topical section and the closing (Schwartz & Jacobs, 1979; Gilbert, 1993) (see Appendix K). During the interview, the author followed the interview guide including the full list of questions in their appropriate order on how to ask questions, when to probe and so on. There were 6 structured questions with probes provided for the interview. All the responses were tape-recorded to ensure that the information was exactly as given. In addition, the author did not simply record and process responses but participated in a conversation with the teacher. It involved attending to the
conversation sensitively and also thinking about when to probe for clarification or elaboration, and when to sit quietly and acknowledge the silence of the teacher.

After the interview, the fieldnotes transcribed from the tape were written within three days to minimize the period between data collection and data storing, and to reflect on the data before commencing the next interview. To ensure the content was correct, all the transcript data would be sent back to relevant interviewees for their proof read and signature (see Appendix L).

8.9 Analysis of Data

A total of 20 questionnaires (16 from the main trial and 4 from the second trial) were processed from the eight teachers and a total of 700 questionnaires (560 for the main trial and 140 for the second trial) were processed from the 420 pupils.

The P.E. teachers responses to the different approaches in both the sports were compared. A paired t-test was used to give an 'indication' of the strength of differences.

Based on Bogdan and Biklen's (1992) suggestion on different categories for developing coding, the data of the teacher's responses for the follow-up interview were coded with 3 different categories including (1) process codes, (2) perspectives codes, and (3) event codes. The transcript files of the teachers interview are shown in Appendix L as an example.

The students' responses in both Basketball and Volleyball groups were computed with the ANOVA Four-way repeated measures method in which comparison between Basketball and Volleyball, between the modified cognitive approach and the skill-based approach, between the experienced P.E. teachers and inexperienced P.E. teachers, and between the male and female P.E. teachers would be calculated.
8.10 Assumptions and Limitations

There are four assumptions underpinning the validity of this study. Firstly, since the teachers graduated from teacher training, majoring in P.E. in the Teacher Training Colleges, it was assumed that they were capable of teaching Basketball and Volleyball effectively with the two different approaches.

Secondly, there were totally 420 secondary school students involved in this study. It was a random sample selection, resulting in a normal distribution with regard to learning capacity.

Thirdly, after teaching the lessons with the two different approaches, the P.E. teachers and their students were invited to complete the questionnaires with 'affective' test items. The test items for measuring the teachers' and students' feelings were based on the study 'Psychometric Properties of the Intrinsic Motivation Inventory in a Competitive Sport Setting: A Confirmatory Factor Analysis' by McAuley, Duncan & Tammen (1989) and the study 'Physical Activity Enjoyment Scale: Two Validation Studies' by Kendzierski & Decarlo (1991). Slight modifications had been carried out to suit the situation in Hong Kong. It was assumed that these two tests were reliably demonstrated and measured (see Appendix H & I).

Fourthly, before conducting the tests, both the P.E. teachers and the students were briefed on the administration of the procedures of completing the questionnaires. A special briefing session was organized for the P.E. teachers. They were reminded to explain questions in the questionnaire one by one to the students to ensure that each student would understand the questions. It was assumed that both the P.E. teachers and students would report truthfully.

Many studies which have investigated teaching games for understanding have been based on single teacher reports and it might appear that this study in using 8 teachers selected to be representative of sex and experience can be generalized more widely. The author recognises that in selecting teachers comfortable with content some caution as to generalisation is necessary. Accepting this, it is argued that this sample of
teachers and children do allow judgments to be made about the value of the approach within the 'affective' modes identified.

Understandably the comparisons between Western countries with classes under 30 in reasonable facilities and the Hong Kong situation of 35 students on a small Basketball court might negate direct comparison, but is the 'real' situation for Hong Kong teachers and students.
Figure 3: Survey on Affective Aspects of Students with Three Different Approaches
Chapter Nine

Results

9.1 Introduction

This chapter presents the results of the major experimental design in which the feelings of the P.E. teachers were sought before, during and one year after teaching Basketball and Volleyball using a combination of three different approaches, traditional skill-based approach, modified cognitive (highly structured game and tactics first) and cognitive (approximating teaching games for understanding) approaches. Following this the results of the student enjoyment measures in each of these conditions are presented.

9.2 Teachers' Responses

9.2.1 Immediate Responses After A Two-day Workshop

There are five questions in the questionnaire. The objectives are to investigate how P.E. teachers feel, how comfortably they teach and what other difficulties are envisaged in adopting the modified cognitive approach. The eight P.E. teachers were divided into two groups of four, one Basketball group and one Volleyball group. Within each group, one male and one female P.E. teachers were categorized as experienced teachers while the other two would be classified as inexperienced teachers. Each group of P.E. teachers would express their feeling on the questions of that particular game. For instance, the Basketball group would give their feeling on the teaching of Basketball with this new approach.

As mentioned previously, a two-day workshop was organized for the 8 experienced and inexperienced P.E. teachers teaching Basketball and Volleyball. The detailed content of the workshop is described in the Chapter Eight (section 8.6, p.108). After the workshop, their immediate responses were collected by completing a questionnaire (see Appendix D). Below are the results of the Basketball group.
a. The Basketball Group

1. *What was your feeling about this teaching games for understanding approach immediately after the workshop?*

The experienced P.E. teachers felt that the modified cognitive approach was refreshing and interesting while the inexperienced teachers did not agree and reported that it was not logical as the skills and techniques were being ignored. However, they all supported that this approach would be worth trying and would also be beneficial for students to learn with interest.

2. *Did you enjoy the workshop? If so, How? Any way it could be better?*

The results reported that both the experienced and inexperienced P.E. teachers enjoyed the workshop. The modified teaching games for understanding approach would enable the students to think and make decision and know how to react in the game. They agreed that the approach would be more effective subject to adequate provision of P.E. equipment and with small class size. This was also a practical problem reflected by the student-teachers in the pilot study (section 7.4, p.98). Again, this crucial point reminded the author to be aware of the adverse effect given to the main experimental design.

3. *Having seen and taken part in demonstration lessons in the workshop do you teach comfortably with this approach?*

There was no difference in response from the experienced and inexperienced P.E. teachers. All of them reflected that they could teach comfortably but with pressure because this approach was new to them. What they expressed was that because they were not too familiar with the new approach, they were worried about whether they were in the right direction or not. The lesson plans would become the ‘Bible’ to follow.
4. How confident are you about continuing with this form of teaching?

Both the experienced and inexperienced P.E. teachers reflected they had adequate confidence to teach with this approach. In case a problem arose, they would manage to solve it. Obviously, their incentive and curiosity did play an important role to build up their confidence. Credit must be given to the work done during the workshop.

5. Open feedback.

All of them agreed, the modified cognitive approach was exciting and would help students to learn with enjoyment. Again, they were worried about the inadequacy of ground and P.E. equipment which would handicap the implementation and effectiveness of this approach. Apart from that, class size was only often their concern.

There was no obvious difference between the experienced and inexperienced P.E. teachers in the Basketball group, with the exception of one inexperienced teacher expressing concern about ‘students ignorance of techniques’ in the modified cognitive approach. Their responses were positive and encouraging. They enjoyed the workshop and would have confidence in teaching with this approach. In addition, they also agreed that this approach was logical and beneficial to students in learning games.

b. The Volleyball Group

Though their views were not completely the same as those in the Basketball group, the reflections from the Volleyball group were also very supportive and constructive. They enjoyed the workshop and most of them had confidence in teaching with the new approach. Their responses are outlined as follows.

1. What was your feeling about this teaching games for understanding approach immediately after the workshop?

Both the experienced and inexperienced P.E. teachers felt that the modified cognitive approach was refreshing, logical and reasonable. This approach would be beneficial for students to learn with enjoyment particularly with the provision of understanding the
tactics and decision making skills. One of the experienced male P.E. teacher, however, was worried that students would not master the skills and techniques in the game.

2. Did you enjoy the workshop? If so, How? Any way it could be better?

All of them reported that they enjoyed the workshop because this approach was so refreshing and new to them and would enable students to learn the games with interest and enjoyment. Like the Basketball group, they were also worried about the inadequate provision of P.E. equipment which would handicap the implementation and effectiveness of this approach. Again, their worry is sound and necessary awareness should be given to it in the main experimental design. Apart from that, one of the inexperienced P.E. teachers, however, reported that this approach would be better if more skills and techniques were to be provided for practice.

3. Having seen and taken part in demonstration lessons in the workshop do you teach comfortably with this approach?

Conversely, this time all but one inexperienced P.E. teachers felt that they could teach comfortably with this approach. Of course, more time for preparation in advance would be needed. One of the experienced female P.E. teacher reported that she was worried that those students who had no experience in playing Volleyball would not able to play well in the game.

4. How confident are you about continuing with this form of teaching?

The experienced P.E. teachers reflected that they had absolute confidence with this form of teaching while those inexperienced P.E. teachers expressed that they would be confident when they could manage this form of teaching.

5. Open feedback.

Like the Basketball group, they thought that the adequacy of ground and P.E. equipment were crucial in implementation this approach. In addition, both experienced and inexperienced P.E. teachers expressed that if students could master the skills and techniques to a certain level in advance, the learning outcome would become better.
The general impression from the above findings was that both the experienced and inexperienced P.E. teachers found the approach refreshing, logical and stimulating. The experienced P.E. teachers showed with greater confidence in teaching with this approach than the inexperienced ones. Having the same line of thought, both of them expressed that the implementation of this approach would be more effective if the students could acquire certain level of skills and techniques in advance.

Apart from looking at the difference between the experienced and inexperienced teachers, there is another interesting dimension worth studying, and it is the difference between the Basketball and Volleyball groups. It seems that the Basketball group, in general, gave a more supportive and positive response than the Volleyball group. The reason why the Volleyball group got this impression is further investigated and discussed in a latter chapter.

9.2.2 Immediate Responses After A Second Trial Teaching Workshop

After the main trial teaching of Basketball and Volleyball with the modified cognitive approach and the traditional approach, a one-day second trial teaching workshop was organized for the same group of Volleyball P.E. teachers. During the workshop, a 6 x 1 hour lesson plan was being introduced and the differences between the modified cognitive approach and the cognitive approach were also identified. In addition, practical teaching was also being demonstrated for discussion. After the workshop, the same questionnaire for the main trial teaching was given for collecting their feelings on this approach. The intention was to compare the difference of their feelings between two different approaches. Details are summarized and reported as follows.

1. What was your feeling about this teaching games for understanding approach immediately after the workshop?

Similar to the responses of the main trial teaching workshop, both the experienced and inexperienced P.E. teachers expressed that this approach was interesting, logical, and the procedures were very clear. One of the inexperienced male P.E. teachers, however,
reflected that the duration for 1 Vs 1 activities was too long. He suggested that more opportunity should be given to students to practise how to create and deny spaces and even win a point in different formations such as 2 Vs 1 and 2 Vs 2 arrangements.

2. Did you enjoy the workshop? If so, how? Any way it could be better?

The results reported that all of them enjoyed the workshop because this approach was interesting and allowed students to play the game with appropriate tactics in the games situation. They commented that more time and instructions for the implementation of this approach would definitely improve the learning outcome because they would better understand the new approach. As a result, they, eventually, would improve their teaching effectiveness with this new approach.

3. Having seen and taken part in demonstration lessons in the workshop do you teach comfortably with this approach?

Both the experienced and inexperienced P.E. teachers gave a positive answer because they had previous experience in adopting the modified cognitive approach. They envisaged that students would learn according to their own ability and have more opportunity to develop their confidence in the game.

4. How confident are you about continuing with this form of teaching?

All but one inexperienced female P.E. teacher, reflected that they would have adequate confidence with this form of teaching. One of them even commented that he would have adequate confidence to teach other games with this approach. However, one of the inexperienced female P.E. teachers felt that at the present moment, she had adequate confidence just because she had completed this 6 x 1 hour lesson plan of Volleyball with the cognitive approach.
5. **Open feedback.**

All of them felt that the cognitive approach was a great idea and a good approach. Interestingly, similar to the responses in the modified cognitive approach, the experienced P.E. teachers commented that students would perform better if they could master certain level of skills and techniques in advance. On the other hand, the inexperienced P.E. teachers commented that adequate opportunity for familiarization of this approach and diagrams for illustration of the lesson plans were vital.

### 9.2.3 The Main Trial Teaching

Comparisons of teacher responses were made between and within the following variables.

1. Basketball - Volleyball
2. traditional approach - modified cognitive approach
3. experienced - inexperienced
4. female and male teachers
5. interest/enjoyment - perceived/competence - effort/importance - tension/pressure.

As mentioned in the Procedure chapter (Chapter Eight, section 8.9, p.111), considerable thought was given to the significance of these results, small numbers and lack of homogeneity between sports meant that recognized statistical procedures might be inappropriate. After much discussion with statistical experts it was decided that a paired t-test could be used within sports to give some indication of the strength of the findings, but the reader must treat such findings with caution. Under these conditions certain statistical differences were identified.
1. Basketball group

<table>
<thead>
<tr>
<th>Ball Games</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><em>Interest-enjoyment</em></td>
<td>14.00</td>
<td>1.82</td>
<td>17.00</td>
<td>0</td>
<td>3.00</td>
<td>3.29*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived-competence</td>
<td>14.00</td>
<td>2.16</td>
<td>14.25</td>
<td>1.50</td>
<td>0.25</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effort-importance</td>
<td>12.75</td>
<td>3.86</td>
<td>16.50</td>
<td>1.29</td>
<td>3.75</td>
<td>2.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension-pressure</td>
<td>15.50</td>
<td>4.20</td>
<td>11.00</td>
<td>2.16</td>
<td>-4.50</td>
<td>-1.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Perceived-competence</em></td>
<td>13.25</td>
<td>1.70</td>
<td>15.00</td>
<td>1.41</td>
<td>1.75</td>
<td>7.00*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effort-importance</td>
<td>15.00</td>
<td>3.36</td>
<td>14.25</td>
<td>3.77</td>
<td>-0.75</td>
<td>-0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension-pressure</td>
<td>12.50</td>
<td>2.38</td>
<td>14.00</td>
<td>5.35</td>
<td>1.50</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: (*) = Significance (2-tailed)

Table 8: The comparison of results in four dimensions between two different approaches, teaching experience and genders in the Basketball group.

In the Basketball group, significant differences on two dimensions were computed. The first one was on the Interest-enjoyment dimension between the traditional approach (mean value 14.00) and the modified cognitive approach (mean value 17.00) (t value 3.29, p<0.05). The second one was on the Perceived-competence dimensions between the experienced (mean value 15.00) and inexperienced teachers (mean value 13.25) (t value 7.00, p<0.01).
2. Volleyball group

<table>
<thead>
<tr>
<th>Ball Games</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD Trad</th>
<th>Mean</th>
<th>SD Modi</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td>Interest-Enjoyment</td>
<td>14.00</td>
<td>4.24</td>
<td>14.25</td>
<td>4.19</td>
<td>0.25</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived-competence</td>
<td>15.75</td>
<td>2.63</td>
<td>11.50</td>
<td>3.10</td>
<td>-4.25</td>
<td>-1.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effort-importance</td>
<td>12.00</td>
<td>3.36</td>
<td>11.00</td>
<td>3.16</td>
<td>-1.00</td>
<td>-0.47</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension-pressure</td>
<td>16.00</td>
<td>2.82</td>
<td>14.50</td>
<td>3.87</td>
<td>-1.50</td>
<td>-1.26</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volleyball Experience</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD Inexp</th>
<th>Mean</th>
<th>SD Exp</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest-Enjoyment</td>
<td>12.50</td>
<td>4.65</td>
<td>15.75</td>
<td>2.63</td>
<td>3.25</td>
<td>2.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived-competence</td>
<td>12.50</td>
<td>3.10</td>
<td>14.75</td>
<td>3.94</td>
<td>2.25</td>
<td>0.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort-importance</td>
<td>13.50</td>
<td>3.10</td>
<td>9.50</td>
<td>1.29</td>
<td>-4.00</td>
<td>-2.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tension-pressure</td>
<td>13.50</td>
<td>3.87</td>
<td>17.00</td>
<td>1.15</td>
<td>3.50</td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD Male</th>
<th>Mean</th>
<th>SD Fem</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest-Enjoyment</td>
<td>13.50</td>
<td>4.35</td>
<td>14.75</td>
<td>3.94</td>
<td>1.25</td>
<td>1.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived-competence</td>
<td>14.75</td>
<td>3.20</td>
<td>12.50</td>
<td>3.87</td>
<td>-2.25</td>
<td>-0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort-importance</td>
<td>12.25</td>
<td>3.40</td>
<td>10.75</td>
<td>2.98</td>
<td>-1.50</td>
<td>-1.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tension-pressure</td>
<td>16.75</td>
<td>1.50</td>
<td>13.75</td>
<td>4.03</td>
<td>-3.00</td>
<td>-1.41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: The comparison of results in four dimensions between two different approaches, teaching experience and genders in the Volleyball group.

In the Volleyball group, the results showed that no significant differences were found.
Figure 4: The Interest-enjoyment dimension showed difference between the traditional approach and the modified cognitive approach in the Basketball group.

In the Basketball group, significant difference of the Interest-enjoyment dimension was illustrated in Figure 4. Since the teaching games for understanding approach was novel and challenging, all P.E. teachers of the Basketball group showed interest in it. Their views could be referred to their responses in the questionnaire. For the inexperienced P.E. teacher, their answers were simply that they were curious to understand it. Unlike the inexperienced P.E. teachers, the interest of the experienced P.E. teachers came from the dissatisfaction with the existing approach (the traditional approach) in games teaching. It is clearly shown in Chapter Six (section 6.3, p. 86) that 30.4% of secondary P.E. teachers found difficulty in adopting the traditional approach.

Another significant difference was found in the Perceived-competence dimension between the experienced (mean value 15.00) and the inexperienced P.E. teachers (mean value 13.25) (see Figure 5). The results indicated that the experienced P.E. teachers perceived the teaching games for understanding approach differently from the inexperienced P.E. teachers because of their longer teaching experience. Comparatively, the experienced P.E. teachers were in a more advantageous position to have greater and flexible teaching ability than the inexperienced P.E. teachers in handling and tackling the problems created by the students during lessons. They can overcome these problems and reduce the interruption on the lessons easily.
9.2.4 The Second Trial Teaching

After the main trial teaching, a second trial teaching on Volleyball with the cognitive approach was administered by the Volleyball group. The same questionnaire was distributed to collect their responses after their teaching.

Comparisons were made to study the difference between two different approaches, teaching experience and genders.

*Figure 5*: The Perceived-competence dimension showed difference between the experienced and inexperienced P.E. teachers in the Basketball group.
1. The modified cognitive approach and the cognitive approach

<table>
<thead>
<tr>
<th>Ball Games</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approach</td>
<td>Interest-Enjoyment</td>
<td>14.25</td>
<td>4.19</td>
<td>16.00</td>
<td>1.41</td>
<td>1.75</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived-competence</td>
<td>11.50</td>
<td>3.10</td>
<td>13.75</td>
<td>2.98</td>
<td>2.25</td>
<td>1.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effort-importance</td>
<td>11.00</td>
<td>3.16</td>
<td>13.00</td>
<td>3.74</td>
<td>2.00</td>
<td>1.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tension-pressure</td>
<td>14.50</td>
<td>3.87</td>
<td>13.25</td>
<td>2.21</td>
<td>-1.25</td>
<td>-0.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Volleyball Experience</td>
<td>Interest-Enjoyment</td>
<td>16.50</td>
<td>1.29</td>
<td>13.75</td>
<td>3.86</td>
<td>-2.75</td>
<td>-1.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived-competence</td>
<td>13.75</td>
<td>3.59</td>
<td>11.50</td>
<td>2.38</td>
<td>-2.25</td>
<td>-1.36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effort-importance</td>
<td>9.75</td>
<td>2.21</td>
<td>14.25</td>
<td>2.87</td>
<td>4.50</td>
<td>4.70*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tension-pressure</td>
<td>15.75</td>
<td>1.70</td>
<td>12.00</td>
<td>2.94</td>
<td>-3.75</td>
<td>-2.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Interest-Enjoyment</td>
<td>15.50</td>
<td>0.57</td>
<td>14.75</td>
<td>4.57</td>
<td>-0.75</td>
<td>-0.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived-competence</td>
<td>10.75</td>
<td>1.70</td>
<td>14.50</td>
<td>3.10</td>
<td>3.75</td>
<td>2.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effort-importance</td>
<td>11.00</td>
<td>3.16</td>
<td>13.00</td>
<td>3.74</td>
<td>2.00</td>
<td>1.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tension-pressure</td>
<td>13.25</td>
<td>2.98</td>
<td>14.50</td>
<td>3.31</td>
<td>1.25</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: (*) = Significance (2-tailed)

Table 10: The comparison of results in four dimensions between two different approaches (modified cognitive and cognitive), teaching experience and genders in the Volleyball group of the second trial teaching.

In the second trial teaching, significance difference was found in the Effort-importance dimension between the experienced (mean value 9.75) and inexperienced P.E. teachers (mean value 14.25) in both of the modified cognitive approach and the cognitive approach. The t-value was 4.70 (p<0.02).
2. The traditional approach and the cognitive approach.

<table>
<thead>
<tr>
<th>Ball Games</th>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Trad</td>
<td></td>
<td>Trad</td>
<td></td>
<td>Cogn</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interest-Enjoyment</td>
<td>14.00</td>
<td>4.24</td>
<td>16.00</td>
<td>1.41</td>
<td>2.00</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived-competence</td>
<td>15.75</td>
<td>2.63</td>
<td>13.75</td>
<td>2.98</td>
<td>-2.00</td>
<td>-1.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effort-importance</td>
<td>12.00</td>
<td>3.36</td>
<td>13.00</td>
<td>3.74</td>
<td>-1.00</td>
<td>1.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tension-pressure</td>
<td>16.00</td>
<td>2.82</td>
<td>13.25</td>
<td>2.21</td>
<td>-2.75</td>
<td>-1.29</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volleyball</td>
<td></td>
<td>Exp</td>
<td></td>
<td>Inexp</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interest-Enjoyment</td>
<td>15.75</td>
<td>2.87</td>
<td>14.25</td>
<td>3.59</td>
<td>-1.50</td>
<td>-0.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived-competence</td>
<td>16.00</td>
<td>2.16</td>
<td>13.50</td>
<td>3.10</td>
<td>-2.50</td>
<td>-1.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effort-importance</td>
<td>10.75</td>
<td>1.70</td>
<td>14.25</td>
<td>3.86</td>
<td>3.50</td>
<td>2.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension-pressure</td>
<td>15.75</td>
<td>1.70</td>
<td>13.50</td>
<td>3.41</td>
<td>-2.25</td>
<td>-1.17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>Diff</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td>Fem</td>
<td></td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interest-Enjoyment</td>
<td>14.25</td>
<td>3.77</td>
<td>15.75</td>
<td>2.63</td>
<td>1.50</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived-competence</td>
<td>13.25</td>
<td>3.40</td>
<td>16.25</td>
<td>0.95</td>
<td>3.00</td>
<td>1.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effort-importance</td>
<td>10.25</td>
<td>1.25</td>
<td>14.75</td>
<td>3.30</td>
<td>4.50</td>
<td>3.40*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension-pressure</td>
<td>14.50</td>
<td>2.51</td>
<td>14.75</td>
<td>3.40</td>
<td>0.25</td>
<td>0.11</td>
<td></td>
</tr>
</tbody>
</table>

Key: (*) = Significance (2-tailed)

Table 11: The comparison of results in four dimensions between two different approaches (traditional and cognitive), teaching experiences and genders in the Volleyball group of the second trial teaching.

Another significant result with t-value of 3.40 (p<0.05) was found on the Effort-importance dimension between the female (mean value 10.25) and male P.E. teachers (mean value 14.75) on the combined scores of the traditional and cognitive approaches.
Firstly, the results in Figure 6 reflected that both the experienced and inexperienced P.E. teachers showed significant difference in Effort-importance dimension. The mean value of the experienced P.E. teachers was 9.75 while the mean value of the inexperienced P.E. teachers was as high as 14.25 (see Figure 6). From the above figure, the results may indicate that the inexperienced P.E. teachers had put greater effort than those experienced P.E. teachers in teaching with these two different approaches. The main reason was recorded that the inexperienced ones had shorter years of teaching experience. To compensate for their inexperience, they had put more effort in their teaching.

Figure 7: The Effort-importance dimension showed difference between the female and male P.E. teachers in the Volleyball group.
Secondly, one of the dimensions, Effort-importance dimension a significant difference between the female and the male was found in the traditional approach and the cognitive approach (see Figure 7). The result showed that females (mean 10.25) was inferior to male P.E. teachers (mean 14.75). A closer investigation on the questionnaire might probably give an answer to this difference. Actually, there was no remarkable difference in answering the first two questions asking about their perceived importance and effort put in the new approach. However, the answer for the third question was extremely different. The male P.E. teachers reflected that they tried really hard in teaching the games while the female showed that they did not try really hard. It might imply that the females did not work as hard as the males in teaching. This attitude would definitely give detrimental effect to the teaching.

9.2.5 The Follow-up Interview

One year after the workshop, a follow-up interview was conducted with the original eight P.E. teachers who participated in the workshop and two trials of teaching. Their feelings towards, perception of, and progress in implementation, of the teaching games for understanding approach were sought, together with the problems faced throughout the year. The interviews were completed within a 6 day period in 8 different schools. After the transcription and coding of data procedures, the results were prepared and a summary is presented below. The transcript data can be found in Appendix L.

a. The Basketball Group

1. In what way do you feel this approach to games teaching has influenced you?

All four teachers reported changes in their games lessons after the workshops because, they said, they thought the teaching games for understanding approach was refreshing, stimulating and beneficial to students. Sometimes the change was very obvious.

I learn that this approach is very effective from which I can start the lesson by teaching the games first and then followed by tactics.

(Response from inexperienced male teacher)
The other three replied that they had made slight changes but that they, sometimes, taught using a technique focus. The main reason they all gave for 'only a slight change' was their limited knowledge about this new approach and their fear of poor class discipline during the lesson.

2. Can you identify ways in which the teaching games for understanding has influenced your teaching?

All of them expressed that they changed their teaching approach from the skill-based approach toward the teaching games for understanding approach. They put emphasis on games and tactics. Technique was no longer the key element in a lesson. One interesting answer was recorded from the experienced male P.E. teacher who noted that he used the new approach selectively. He did not recommend teaching Handball with this new approach due to the danger of injury.

I only teach Basketball and Volleyball with the TGFU approach. I do not teach Handball with this new approach because the passing is so fast that the ball will hurt students if it hits them

(Response from experienced male teacher)

Clearly the idea of modifying the ball had not occurred to him.

Certainly the experience had made them think differently about the underlying concept of games teaching. Three of them indicated that they had a new and refreshing impression on games, tactics, techniques and enjoyment of a lesson. They recognized that the major elements in a game lesson were the game itself and tactics, while technique could play a supportive role and indeed that enjoyment came from the game rather than the technique.

3. What are the good things of this approach (from teacher’s perspective and student’s perspective) ?

Interestingly, each of them listed quite different benefits for this new approach such as: it was beneficial to students in terms of generating more enjoyment, it kept students
more actively involved in the lesson, it gave a refreshing and stimulating feeling, it helped students know how to play the game, etc. A particularly interesting benefit noted by the experienced female P.E. teacher was ‘the opportunity to identify leadership among students’. She explained that during the game and learning tactics, opportunities were given to students to discuss, to think and to practise. Through this process, a few of them who had leadership potential would take the lead in the discussion and practice.

During the game or learning tactics, opportunities are given to students in the form of small groups to discuss, think and practise the tactics. Through this process, one or even a few of them will take the lead in discussion and practice. This occasion will evidence me to identify who have got leadership potential.

(Response from experienced female teacher)

From the student’s perspective, the teachers suggested that the new approach could provide more satisfaction and enjoyment to students, with more opportunity to think. Unsolicited, three out of the four P.E. teachers expressed the views that this new approach would enable students to learn according to their own abilities.

4. Do you see any weaknesses in this approach (from teacher’s perspective and student’s perspective)?

Three out of four P.E. teachers voiced their concern on the poor class control during the lesson with this new approach. One of the inexperienced male P.E. teacher reflected that he was worried about student’s poor performance in the game because they learned less technique in the lesson.

The lesson is not so well-organized in the sense that students are rather out of control. They keep on talking and talking

(Responses from 3 experienced and inexperienced female and male and teachers)

and
I have one concern on the class discipline during the lesson. Owing to the encouragement of students to talk and discuss how to play the game, the class discipline is rather out of control.

(Response from inexperienced male teachers)

Clearly these teachers perceive the disadvantages as about ‘class management’. Whilst this has be noted in the ‘Western’ literature, it may be that the problem is more obvious in the ‘Hong Kong - Chinese’ education system.

The teachers noted two further linked weaknesses. Firstly, they were worried about students who might be in a inferior position in the game because the teaching games for understanding approach did not put sufficient emphasis on techniques. Secondly, they commented that students might also have a feeling of ‘nothing being learnt’ from the games lesson if techniques were not being taught.

5. What problems did you face?

Different P.E. teachers expressed different concerns which they had faced within the year. The problems included: the inadequate provision of sports facilities and PE equipment, their limited knowledge of how to evaluate their own performance when teaching games for understanding as well as assessing students objectively. Difficulties in class discipline was re-iterated and the uncertainty as to how P.E. inspectors would view this new approach was noted.

There were two common problems mentioned by all of them. They reflected strongly that they had inadequate understanding of this new approach and they were also worried about the negative view from their headteacher.

My concern is that I don’t know how the headteacher perceived my teaching ability in game lesson with the TGFU approach when he observed the lesson which was not properly taught with good discipline.

(Responses from experienced and inexperienced female and male teachers)
These problems are understandable. Since the teaching games for understanding approach was new in Hong Kong, they could not access related information easily, in particular when they faced difficulties. Of course to date there is very little written in Chinese. In addition, one of the characteristics of this new approach was to encourage students to talk, to discuss and to decide how to make appropriate responses during the lesson. It would give an impression to the outsider that the class was a little bit out of control. Such practice was entirely different from the skill-based approach. Explicitly, they were worried that the headteacher would have a negative view on their teaching abilities.

6. What kind of help do teachers need for this approach?

Like question 5, different P.E. teachers suggested different kinds of help that they perceived as important, such as, to provide an objective assessment method, to give a positive impression to the headteacher on this new approach. However, all of them recognized that help should be given to P.E. teachers, this included the provision of more information of this new approach, such as lesson plans and handouts, as well as conducting demonstration lessons, workshops, seminars and conferences. In addition, one experienced female P.E. teacher expressed their concern that for long-term purpose, a change to the PE games curriculum was needed.

The final help is to change PE curriculum on games teaching. With the change, P.E teachers can follow it and at the same time, it may imply that P.E. inspectors support this new approach.

(Response from experienced female teacher)

On the other hand, one inexperienced female teacher reflected that the best help was to provide the teaching games for understanding training to the PE student-teachers in the Teacher Training Institute.

The crucial point is to introduce this new approach to P.E student-teachers in the Institute so that they have, at least, heard of it and understand what it is.

(Response from inexperienced female teacher)
b. The Volleyball Group

In some ways these responses mirror those of the Basketball, but there are differences which are revealing.

1. **In what way do you feel this approach to games teaching has influenced you?**

Four of them reported that they had changed their teaching approach after the workshops. Two inexperienced ones expressed the view that they, sometimes, taught technique because they did not know whether they implemented this new approach correctly or not and as a result they lost the confidence to continue with it.

I change a lot in my teaching. I start the lesson by teaching games and tactics first and techniques are no longer the important elements.

(Response from experienced male teacher)

2. **Can you identify ways in which the teaching games for understanding has influenced your teaching?**

The responses of all four teachers supported the idea of starting with the game followed by tactics, and technique was no longer the single major element in the lesson. They viewed the game from a new perspective. They reported that they realized that a game was full of problems to solve. Through this process, their cognitive experience could be developed and enjoyment would eventually appear because of achievement - they learned how to play the game at their own ability and pace.

I learn that game and tactics are two key elements in games lesson. These two elements will enable students to understand the game and play wisely. Through these elements, all students with different abilities can follow the game and perform properly.

(Response from inexperienced female teacher)
3. What are the good things of this approach (from teacher's perspective and student's perspective)?

From teacher's perspective, all accepted that the teaching games for understanding could provide opportunity for students to learn according to their own pace as well as to develop their cognitive experience. At the same time, one experienced and one inexperienced P.E. teachers perceived this new approach to be refreshing and stimulating. Interestingly, one experienced male P.E. teacher commented that this new approach could generate less confrontation between students and teacher because students were highly motivated to play Volleyball with enjoyment.

The TGFU approach does enable me to have less confrontation with my students because they are so happy and busy in playing the game.

(Response from experienced male teacher)

For the students perspective, the teachers all agreed that the teaching games for understanding approach did produce more enjoyment than the skill-based approach because students could learn according to their own pace and abilities. In addition, students knowing how to play Volleyball and making appropriate responses in the games situation were further good things with this new approach.

4. Do you see any weaknesses in this approach (from teacher's perspective and student's perspective)?

The two inexperienced P.E. teachers listed one of the weaknesses of this new approach was the danger of losing control and potential for indiscipline during the lesson. Two experienced teachers expressed two separate weaknesses; the problems of assessment method and the student's poor technical performance in the game.

I wonder the objectivity of the assessment on the performance of students by adopting the TGFU approach.

(Response from experienced male teacher)
In addition, from the student's perspective, the two experienced P.E. teachers pointed out a further weakness: the teaching games for understanding approach could not cater for two different extremes of students, very high and low abilities. They had an impression that skilful students felt very disappointed while the low ability students might have a feeling of being too challenged in the lesson. For the inexperienced teachers, they felt that this new approach would create a situation in which students would have a feeling of being inferior to others in playing the game and also there was nothing to learn in the lesson because the emphasis of this approach was not on learning techniques. (It is interesting to note this as a major rationale presented by Bunker and Thorpe in their works was to cater for these groups - an explanation may be that the lessons prepared had not addressed issues like strike 'or' catch / throw in the same game).

5. What problems did you face?

In response to the problems that they faced, all of them voiced their concerns on the limitation of information and teaching materials of teaching games for understanding which would hampered their further understanding of this new approach.

I need more information about this approach and someone to tell me how to teach properly.

(Response from experienced female teacher)

The lack of an objective assessment method for this new approach was another problem for them. The two inexperienced P.E. teachers mentioned three different problems which were different from the experienced ones. They faced the problems with poor class discipline, and were worried about the view of the P.E. inspectors and no support from experts.
I seldom hear any comment and view from the P.E inspectors. By this September, I will be inspected to teach games. Honestly, it is safest to teach games by the skill-based approach in such circumstances.

(Response from inexperienced female teacher)

6. What kind of help do teachers need for this approach?

All of them listed out quite a number of different kinds of help that they thought of. Not surprising the answers to this question reflected the earlier points: access to more information and teaching material of teaching games for understanding was needed for successful implementation of this new approach. In addition, they also proposed the need for demonstration lessons, workshops, seminars and conferences to P.E. teachers to help toward a better understanding of this approach.

The urgent need is to help P.E. teachers by providing them more information about the TGFU approach such as attending the TGFU course.

(Response from experienced male teacher)

In addition, the experienced P.E. teachers reflected that the support for this new approach from the headteacher and other P.E. colleagues should be provided while the provision of ideas about objective assessment method was important. The inexperienced teachers asked for more support from experts.

Summary of teachers responses.

Whilst there are some slight differences in responses between Basketball and Volleyball, there are considerably more commonalties. Like other authors the advantages seem to be related to value for children, the disadvantages seem to centre round the problems for teachers, with the exception of an understandable concern worry about how much technique is learnt. Interestingly all of the teachers recognized the value of the approach and desired more information and support.
9.3 Students' Responses

9.3.1 The Main Trial Teaching

In addition to collecting the teachers' responses, a questionnaire was distributed to students after the main trial teaching. The questionnaire with 12 questions was designed to investigate the level of enjoyment of students and was distributed after each teaching unit. Unlike the rating scale of the teachers' questionnaire, the lower mean result computed in the students' responses reflects the greater enjoyment and preference towards the new approach. In total, 560 questionnaires were returned by 280 students since all students were tested following each of two approaches. (As a captive audience the only students not processed were those few who were not present for both assessments).

Before applying the ANOVAs, homogeneity (the scores and distribution of scores were found to be the same) between the sets of students' responses was checked. Unlike the teachers' responses in the main trial teaching, the results indicated that these two 'sport' samples were also homogeneous, which allowed for comparisons between Basketball and Volleyball groups as well as between:

1. the traditional approach and the modified cognitive approach.
2. the experienced P.E. teachers and inexperienced P.E. teachers.
3. the girls taught by female P.E. teachers and the boys taught by male P.E. teachers.

The results are summarized in Table 12 and observation of the mean score would seem to indicate more enjoyment:

- in Basketball than in Volleyball (38.85),
- when taught by experienced teachers (38.82),
- in boys lessons (38.96),
- and, most obviously
  when taught using the modified cognitive approach (37.02)
To test the significance of these a priori questions, but also to allow for some post hoc examination of any interactions, a 4-way ANOVA was carried out on all these results. See Table 13.
**ANALYSIS OF VARIANCE**

TOTAL by BALL GAMES | APPROACH | EXPERIENCE | GENDER
---|---|---|---

UNIQUE sums of squares
All effects entered simultaneously

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>18457.214</td>
<td>4</td>
<td>4614.304</td>
<td>42.363</td>
<td>.00</td>
</tr>
<tr>
<td>BALL GAMES (Basketball &amp; Volleyball)</td>
<td>3008.579</td>
<td>1</td>
<td>3008.579</td>
<td>27.621</td>
<td>.000</td>
</tr>
<tr>
<td>APPROACH</td>
<td>9628.007</td>
<td>1</td>
<td>9628.007</td>
<td>88.393</td>
<td>.000</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>3092.600</td>
<td>1</td>
<td>3092.600</td>
<td>28.393</td>
<td>.000</td>
</tr>
<tr>
<td>GENDER</td>
<td>2728.029</td>
<td>1</td>
<td>2728.029</td>
<td>25.046</td>
<td>.000</td>
</tr>
<tr>
<td>2-Way Interactions</td>
<td>1793.957</td>
<td>6</td>
<td>298.993</td>
<td>2.745</td>
<td>.012</td>
</tr>
<tr>
<td>BALL GAMES APPROACH</td>
<td>17.150</td>
<td>1</td>
<td>17.150</td>
<td>.157</td>
<td>.692</td>
</tr>
<tr>
<td>BALL GAMES EXPERIENCE</td>
<td>592.457</td>
<td>1</td>
<td>592.457</td>
<td>5.439</td>
<td>.020</td>
</tr>
<tr>
<td>BALL GAMES GENDER</td>
<td>568.029</td>
<td>1</td>
<td>568.029</td>
<td>5.215</td>
<td>.023</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE</td>
<td>140.000</td>
<td>1</td>
<td>140.000</td>
<td>1.285</td>
<td>.257</td>
</tr>
<tr>
<td>APPROACH GENDER</td>
<td>475.457</td>
<td>1</td>
<td>475.457</td>
<td>4.365</td>
<td>.037</td>
</tr>
<tr>
<td>EXPERIENCE GENDER</td>
<td>864</td>
<td>1</td>
<td>864</td>
<td>.008</td>
<td>.929</td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td>1655.443</td>
<td>4</td>
<td>413.861</td>
<td>3.800</td>
<td>.005</td>
</tr>
<tr>
<td>BALL GAMES APPROACH EXPERIENCE</td>
<td>397.829</td>
<td>1</td>
<td>397.829</td>
<td>3.652</td>
<td>.057</td>
</tr>
<tr>
<td>BALL GAMES APPROACH GENDER</td>
<td>77.257</td>
<td>1</td>
<td>77.257</td>
<td>.709</td>
<td>.400</td>
</tr>
<tr>
<td>BALL GAMES EXPERIENCE GENDER</td>
<td>1026.007</td>
<td>1</td>
<td>1026.007</td>
<td>9.420</td>
<td>.002</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE GENDER</td>
<td>154.350</td>
<td>1</td>
<td>154.350</td>
<td>1.417</td>
<td>.234</td>
</tr>
<tr>
<td>4-Way Interactions</td>
<td>223.779</td>
<td>1</td>
<td>223.779</td>
<td>2.054</td>
<td>.152</td>
</tr>
<tr>
<td>BALL GAMES APPROACH EXPERIENCE GENDER</td>
<td>223.779</td>
<td>1</td>
<td>223.779</td>
<td>2.054</td>
<td>.152</td>
</tr>
<tr>
<td>Explained</td>
<td>22130.393</td>
<td>15</td>
<td>1475.360</td>
<td>13.545</td>
<td>.00</td>
</tr>
<tr>
<td>Residual</td>
<td>59253.829</td>
<td>544</td>
<td>108.922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>81384.221</td>
<td>559</td>
<td>145.589</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 13: Overall Analysis of Variance of Basketball and Volleyball
The ANOVA reveals that the four differences observed in Table 13 are in fact significant at less than the 0.01 level.

Firstly, in the significant results between Basketball and Volleyball, the mean value of Basketball was 38.85 while Volleyball was 43.49. The finding indicated that the students obtained more enjoyment in the Basketball lessons. Secondly from the mean results of two different approaches, the students expressed that they felt more enjoyment with the modified cognitive approach (mean 37.02) than the traditional approach (mean 45.31).

The third significant difference with F value of 28.39 was identified between the experienced P.E. teachers (mean 38.82) and the inexperienced P.E. teachers (mean 43.52).

It might appear that boys lessons in Basketball with experienced teachers using the cognitive approach would be most enjoyable, but to test this post hoc interaction measures were used.

Table 13 reveals the following. For the two-way interactions, three significant results were found:

1. ball games (Basketball and Volleyball) and experience (experienced and inexperienced P.E. teachers) (p<0.02),
2. ball games (Basketball and Volleyball) and gender (female and male) (p<0.02),
3. approach (traditional approach and modified cognitive approach) and gender (female and male) (p<0.05). The following diagrams were prepared to illustrate their interactions.
In the first interaction (see Figure 8), the mean value of the experienced P.E. teachers in the Basketball lessons (35.47) and the Volleyball lesson (42.16) were comparatively smaller than the inexperienced ones (42.23 and 44.81). From the above means, the smaller the mean value, the greater the enjoyment. There is greater enjoyment in both sports with the experienced teacher but the differentiation is more obvious in Basketball.
Interactions between Ball and Gender

Figure 9: Significant results of 2-way interactions between ball games and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups

This figure (Figure 9) indicates that the boys found more enjoyment in the Basketball lesson taught by the male P.E. teachers because the mean values for the boys in the Basketball (35.63) was comparatively smaller than in the Volleyball (42.28) lessons. In addition, the mean value of the males was also smaller than the females in both the Basketball (42.06) and Volleyball (44.68) lessons. The figure illustrates clearly that the differentiation at this point is attributable to male preference.
Interactions between Approach and Gender

Figure 10: Significant results of 2-way interactions between approach and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups.

Again, the interaction (Figure 10) also showed that the boys obtained more enjoyment in the lesson (taught by the male P.E. teachers) (35.73) with the modified cognitive approach. Interestingly, the mean value indicated that the boys enjoyed the lesson more with both approaches (traditional 42.18 and modified cognitive 35.73) than the girls (with female P.E. teachers) (traditional 48.44 and modified cognitive 38.30).

In response to the 3-way interactions, significant results are noted for ball games (Basketball and Volleyball), teaching experience (experienced and inexperienced P.E. teachers) and gender (female and male P.E. teachers). Below is a table to show the 3-way interactions (see Table 14).
<table>
<thead>
<tr>
<th>Ball Games</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basketball</td>
<td>Volleyball</td>
</tr>
<tr>
<td>Experienced</td>
<td>40.00</td>
<td>41.97</td>
</tr>
<tr>
<td>Inexperienced</td>
<td>44.12</td>
<td>47.40</td>
</tr>
</tbody>
</table>

Table 14: Significant results of 3-way interactions among ball games, experience and gender taught with the traditional and modified cognitive approaches in the Basketball and Volleyball groups

Comparatively, the smallest mean value among the above variables was found in the cell of Basketball, experienced and male (30.94) whereas the largest mean value was located in the cell of Volleyball, inexperienced and female (47.40). The findings indicated that the boys acquired more enjoyment in the Basketball lessons taught by the experienced male P.E. teachers. On the other hand, they obtained less enjoyment from the Volleyball lessons taught by the inexperienced female P.E. teachers.

Subsequent to the students' responses of two different groups, the results of each group are also presented separately. For the Basketball group, the summary of the significant results was presented in Table 15 and the mean score would seem to indicate more enjoyment:

- when taught using the modified cognitive approach (34.88),
- when taught by experienced teachers (35.47), and
- in boys lessons (35.63).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Mean Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>42.82</td>
<td>7.94</td>
</tr>
<tr>
<td>Mod. Cog.</td>
<td>34.88</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td>35.47</td>
<td>6.75</td>
</tr>
<tr>
<td>Inexperienced</td>
<td>42.22</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>42.06</td>
<td>6.43</td>
</tr>
<tr>
<td>Male</td>
<td>35.63</td>
<td></td>
</tr>
</tbody>
</table>

*Table 15: Significant results of two different approaches, teaching experiences and genders in the Basketball group.*

To allow for some post hoc examination of any interactions, a 3-way ANOVA was carried out on all these results. See Table 16.
**ANALYSIS OF VARIANCE**

by TOTAL

by APPROACH

by EXPERIENCE

by GENDER

UNIQUE sums of squares
All effects entered simultaneously

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>10505.214</td>
<td>3</td>
<td>3501.738</td>
<td>32.679</td>
<td>.00</td>
</tr>
<tr>
<td>APPROACH</td>
<td>4416.229</td>
<td>1</td>
<td>4416.229</td>
<td>41.214</td>
<td>.000</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>3196.129</td>
<td>1</td>
<td>3196.129</td>
<td>29.827</td>
<td>.000</td>
</tr>
<tr>
<td>GENDER</td>
<td>2892.857</td>
<td>1</td>
<td>2892.857</td>
<td>26.997</td>
<td>.000</td>
</tr>
<tr>
<td>2-Way Interactions</td>
<td>601.271</td>
<td>3</td>
<td>200.424</td>
<td>1.870</td>
<td>.135</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE</td>
<td>32.914</td>
<td>1</td>
<td>32.914</td>
<td>.307</td>
<td>.580</td>
</tr>
<tr>
<td>APPROACH GENDER</td>
<td>84.700</td>
<td>1</td>
<td>84.700</td>
<td>.790</td>
<td>.375</td>
</tr>
<tr>
<td>EXPERIENCE GENDER</td>
<td>483.657</td>
<td>1</td>
<td>483.657</td>
<td>4.514</td>
<td>.035</td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td>3.214</td>
<td>1</td>
<td>3.214</td>
<td>.030</td>
<td>.863</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE GENDER</td>
<td>3.214</td>
<td>1</td>
<td>3.214</td>
<td>.030</td>
<td>.863</td>
</tr>
<tr>
<td>Explained</td>
<td>11109.700</td>
<td>7</td>
<td>1587.100</td>
<td>14.811</td>
<td>.00</td>
</tr>
<tr>
<td>Residual</td>
<td>29146.000</td>
<td>272</td>
<td>107.154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40255.700</td>
<td>279</td>
<td>144.286</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Overall analysis of variance of Basketball group

The results showed that significance differences were found in three comparisons between different approaches (F value 41.21, p<0.01), different teaching experience (F value 29.83, p<0.01) and different genders (F value 26.99, p<0.01). For the first significant difference between two different approaches, the students reflected that they enjoyed more when using the modified cognitive approach (mean 34.88) than the traditional approach (mean 42.82).
Teachers with different experience was found to be the second significance difference. The results indicated that the students obtained more enjoyment from the experienced P.E. teachers (mean 35.47) than those inexperienced P.E. teachers (mean 42.22) during P.E. lessons.

The third significant difference was found in different genders. The results indicated that the boys found more enjoyment when taught by the male P.E. teachers (mean 35.63) than the girls taught by the female P.E. teachers (mean 42.06) in adopting both the traditional approach and the modified cognitive approach during P.E. lessons.

Although there were three individual significant results as presented, there was only one significant interaction effect identified (see Table 16) between different teaching experience (experienced and inexperienced) and different genders (female and male) (see Figure 11). The following figure illustrated the interactions between these two variables.

---

**Figure 11**: Significant results of 2-way interactions between experience and gender taught with the traditional and modified cognitive approaches in the Basketball group.
In Figure 11, the mean score of the inexperienced female was 44.12 and the inexperienced male P.E. teachers was 40.32. On the other hand, the mean scores of the experienced female and male were 40.00 and 30.94. The finding reflected that the boys comparatively enjoyed the lesson taught by the experienced male P.E. teachers.

In the Volleyball group, similar results of significant difference as in the Basketball group can be found. Details are listed as in Table 17. The mean scores indicated that more enjoyment was found:

- when taught using the modified cognitive approach (39.16) and
- when taught by experienced teachers (42.16).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Mean Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>47.81</td>
<td>8.65</td>
</tr>
<tr>
<td>Mod. cog</td>
<td>39.16</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td>42.16</td>
<td>2.65</td>
</tr>
<tr>
<td>Inexperienced</td>
<td>44.81</td>
<td></td>
</tr>
</tbody>
</table>

*Table 17*: Significant results of two different approaches and teaching experiences in the Volleyball group

To enable some post hoc examination of any interactions, a 3-way ANOVA was carried out on all these results. See Table 18.
## **ANALYSIS OF VARIANCE**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>6121.057</td>
<td>3</td>
<td>2040.352</td>
<td>18.433</td>
<td>.000</td>
</tr>
<tr>
<td>APPROACH</td>
<td>5228.929</td>
<td>1</td>
<td>5228.929</td>
<td>47.239</td>
<td>.000</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>488.929</td>
<td>1</td>
<td>488.929</td>
<td>4.417</td>
<td>.037</td>
</tr>
<tr>
<td>GENDER</td>
<td>403.200</td>
<td>1</td>
<td>403.200</td>
<td>3.643</td>
<td>.057</td>
</tr>
<tr>
<td>2-Way Interactions</td>
<td>1516.143</td>
<td>3</td>
<td>505.381</td>
<td>4.566</td>
<td>.004</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE</td>
<td>504.914</td>
<td>1</td>
<td>504.914</td>
<td>4.561</td>
<td>.034</td>
</tr>
<tr>
<td>APPROACH GENDER</td>
<td>468.014</td>
<td>1</td>
<td>468.014</td>
<td>4.228</td>
<td>.041</td>
</tr>
<tr>
<td>EXPERIENCE GENDER</td>
<td>543.214</td>
<td>1</td>
<td>543.214</td>
<td>4.908</td>
<td>.028</td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td>374.914</td>
<td>1</td>
<td>374.914</td>
<td>3.387</td>
<td>.067</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE GENDER</td>
<td>374.914</td>
<td>1</td>
<td>374.914</td>
<td>3.387</td>
<td>.067</td>
</tr>
<tr>
<td>Explained</td>
<td>8012.114</td>
<td>7</td>
<td>1144.588</td>
<td>10.340</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>30107.829</td>
<td>272</td>
<td>110.691</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>38119.943</td>
<td>279</td>
<td>136.631</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 18: Overall analysis of variance of Volleyball group between the traditional approach and the modified cognitive approach*

The first result indicated that significant difference was found between the traditional approach (mean 47.81) and the modified cognitive approach (mean 39.16). From both mean scores, the students felt that they enjoyed the lessons more when taught using the modified cognitive approach than the traditional approach.
The second significant difference between the experienced (mean 42.16) and inexperienced (mean 44.81) P.E. teachers. The finding indicated the students felt more enjoyable when taught by the experienced P.E. teachers.

With the above significant differences found individually between different approaches and between different experience, it might appear that the students would gain more enjoyment in the lessons taught by the experienced teachers using the modified cognitive approach. To test this interactions of the Volleyball group, Table 18 revealed the following.

(1) approach (traditional approach and modified cognitive approach) and experience (experienced and inexperienced P.E. teachers) (p<0.05)
(2) approach (traditional approach and modified cognitive approach) and gender (female and male) (p<0.05)
(3) experience (experienced and inexperienced P.E. teachers) and gender (female and male) (p<0.05)

*Figure 12*: Significant results of 2-way interactions between approach and experience taught with the traditional and modified cognitive approaches in the Volleyball group.
From the mean score of both the experienced (39.18) and inexperienced P.E teachers (39.14) in the modified cognitive approach, there was an extremely slight mean difference with 0.04. With such a small mean difference, it seemed that both the experienced and inexperienced P.E. teachers did very well with the modified cognitive approach and the students obtained the same enjoyment from the teaching. However, strictly speaking, the mean of the inexperienced P.E. teacher (39.14) was the smallest among them. Such a result reflected the point that the students were more enjoyable with the modified cognitive approach taught by the inexperienced P.E. teachers (see Figure 12).

Similarly, the mean score of the female (39.07) and the male P.E. teachers (39.25) of the modified cognitive approach produced a mean difference of 0.18 with an interaction effect between the approach (traditional approach and modified cognitive approach) and gender (female P.E. teacher and male P.E. teacher) (see Figure 13). Based on the mean results, the girls reflected that they acquired more enjoyment in the Volleyball lessons taught by the female P.E. teachers (mean 39.07) with the modified cognitive approach.
With a smallest mean result of 41.97, the above figure (see Figure 14) showed that the girls felt more enjoyable in the Volleyball lessons taught by the experienced female P.E. teachers while the inexperienced female with a highest mean result of 47.40 did poorly in the lessons. However, this was not the case for the male P.E. teachers. In the male P.E. teachers, there was no great mean difference found between the experienced (42.35) and the inexperienced P.E. teachers (42.21). Such results indicated that the boys obtained similar enjoyment in the Volleyball lessons taught by both the experienced and inexperienced male P.E. teachers.

9.3.2 The Second Trial Teaching.

After the main trial teaching, a second trial teaching of Volleyball with the cognitive approach was planned and implemented. To obtain a greater detail, comparisons were made among three different approaches, i.e. (1) the traditional approach and the modified cognitive approach; (2) the modified cognitive approach and the cognitive approach, and (3) the traditional approach and the cognitive approach. The same
group of four Volleyball P.E. teachers but with four different classes of students were invited to take part. Details could be found in Figure 3 (p.114). Significant results were summarized in Table 19 below and the mean scores would seem to indicate more enjoyment:

- when taught using the cognitive approach (37.34)
- when taught by experienced teachers (40.86), and
- in boys lessons (40.88).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Mean Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>47.81</td>
<td>10.47</td>
</tr>
<tr>
<td>Cognitive</td>
<td>37.34</td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td>40.86</td>
<td>3.43</td>
</tr>
<tr>
<td>Inexperienced</td>
<td>44.29</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>44.27</td>
<td>3.39</td>
</tr>
<tr>
<td>Male</td>
<td>40.88</td>
<td></td>
</tr>
</tbody>
</table>

*Table 19: Significant results of two different approaches, teaching experiences and genders in the Volleyball group.*

To enable for some post hoc examination of any interactions, a 3-way ANOVA was carried out on all these results. See Table 20.
**ANALYSIS OF VARIANCE**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROACH</td>
<td>7665.089</td>
<td>1</td>
<td>7665.089</td>
<td>67.242</td>
<td>.000</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>826.289</td>
<td>1</td>
<td>826.289</td>
<td>7.249</td>
<td>.008</td>
</tr>
<tr>
<td>GENDER</td>
<td>805.804</td>
<td>1</td>
<td>805.804</td>
<td>7.069</td>
<td>.008</td>
</tr>
<tr>
<td><strong>2-Way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROACH EXPERIENCE</td>
<td>250.804</td>
<td>1</td>
<td>250.804</td>
<td>20.200</td>
<td>.139</td>
</tr>
<tr>
<td>APPROACH GENDER</td>
<td>177.604</td>
<td>1</td>
<td>177.604</td>
<td>1.558</td>
<td>.213</td>
</tr>
<tr>
<td>EXPERIENCE GENDER</td>
<td><strong>1264.375</strong></td>
<td>1</td>
<td><strong>1264.375</strong></td>
<td><strong>11.092</strong></td>
<td><strong>.001</strong></td>
</tr>
<tr>
<td><strong>3-Way Interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPROACH EXPERIENCE GENDER</td>
<td>50.575</td>
<td>1</td>
<td>50.575</td>
<td>.444</td>
<td>.506</td>
</tr>
<tr>
<td>Explained</td>
<td>11040.539</td>
<td>7</td>
<td>1577.220</td>
<td>13.836</td>
<td>.00</td>
</tr>
<tr>
<td>Residual</td>
<td>31005.886</td>
<td>272</td>
<td>113.992</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42046.425</td>
<td>279</td>
<td>150.704</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 20: Overall analysis of variance of Volleyball group between the traditional approach and the cognitive approach

The first significant difference was found between the traditional approach (47.81) and the cognitive approach (37.34). The students reflected that they were more enjoyable in the lessons using the cognitive approach. The second significant difference indicated that the students felt more enjoyment in the Volleyball lessons taught by the experienced P.E. teachers (40.86) than the inexperienced P.E. teachers (44.29). In the third significant difference, the boys expressed that they enjoyed more in the Volleyball
lessons taught by the male P.E. teachers (40.88) than the girls taught by the female P.E. teachers (44.27).

It would appear that the boys gained more enjoyment in the lessons taught by the experienced male PE teachers. To test this post hoc examination of any interactions, a 3-way ANOVA was carried out on all these results. See Table 20.

![Interactions between Experience and Gender](image)

**Figure 15**: Significant results of 2-way interactions between experience and gender taught with the traditional and cognitive approaches in the Volleyball group.

The significant mean score of the experienced female P.E. teachers was 40.42 and the experienced male was 41.28. On the other hand, the mean scores of the inexperienced female and male P.E. teachers were 48.11 and 40.47. The result indicated that the girls acquired more enjoyment in the Volleyball lessons taught by the experienced female P.E. teachers (40.42). However, the inexperienced female P.E. teachers with the mean value of 48.11 could not enable the girls to feel happier in the Volleyball lesson as the experienced did (see Figure 15).

Lastly, in comparison between the modified cognitive approach and the cognitive approach (see Table 21), the findings indicated that there were no significant
differences between different approaches (modified cognitive approach and cognitive approach); different teaching experience (experienced and inexperienced) and different genders (female and male). It might imply that the students obtained similar enjoyment from two different approaches in the Volleyball lessons. It is evident that the lesson plans of the modified approach of Volleyball is not in an opposite direction from the cognitive approach although the format and teaching procedure have been modified to suit the teaching culture of Hong Kong.

\[
\text{**ANALYSIS OF VARIANCE**}
\]

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>317.211</td>
<td>3</td>
<td>105.737</td>
<td>1.045</td>
<td>.373</td>
</tr>
<tr>
<td>APPROACH</td>
<td>232.232</td>
<td>1</td>
<td>232.232</td>
<td>2.294</td>
<td>.131</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>39.375</td>
<td>1</td>
<td>39.375</td>
<td>.389</td>
<td>.533</td>
</tr>
<tr>
<td>GENDER</td>
<td>45.604</td>
<td>1</td>
<td>45.604</td>
<td>.450</td>
<td>.503</td>
</tr>
<tr>
<td>2-Way Interactions</td>
<td>375.296</td>
<td>3</td>
<td>125.099</td>
<td>1.236</td>
<td>.297</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE</td>
<td>44.004</td>
<td>1</td>
<td>44.004</td>
<td>.435</td>
<td>.510</td>
</tr>
<tr>
<td>APPROACH GENDER</td>
<td>69.004</td>
<td>1</td>
<td>69.004</td>
<td>.682</td>
<td>.410</td>
</tr>
<tr>
<td>EXPERIENCE GENDER</td>
<td>262.289</td>
<td>1</td>
<td>262.289</td>
<td>2.591</td>
<td>.109</td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td>150.089</td>
<td>1</td>
<td>150.089</td>
<td>1.483</td>
<td>.224</td>
</tr>
<tr>
<td>APPROACH EXPERIENCE GENDER</td>
<td>150.089</td>
<td>1</td>
<td>150.089</td>
<td>1.483</td>
<td>.224</td>
</tr>
<tr>
<td>Explained</td>
<td>842.596</td>
<td>7</td>
<td>120.371</td>
<td>1.189</td>
<td>.309</td>
</tr>
<tr>
<td>Residual</td>
<td>27534.400</td>
<td>272</td>
<td>101.229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28376.996</td>
<td>279</td>
<td>101.710</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textit{Table 21:} Overall analysis of variance of Volleyball group between the modified cognitive approach and the cognitive approach.
In general, the students' feedback were so encouraging that they enjoyed the P.E. lessons taught by the male P.E. teachers with the new approach. With the above supportive findings from both the teachers and students in the workshops, the main and second trials teaching, it might conclude that it is appropriate to introduce the cognitive approach to Hong Kong.

9.4 Evaluation of Hypotheses

The research hypotheses are tested and the results are presented below.

**Research Hypotheses tested**

(A) Students reported more enjoyment in the lessons with the modified cognitive approach than with the skill-based approach in Basketball and Volleyball.

(B) Students reported more enjoyment in the lessons taught by the experienced teachers than the inexperienced teachers.

(C) The boys taught by the male teachers reported more enjoyment than the girls taught by the female teachers.

Whilst

(D) Teachers and students reported more enjoyment when using the cognitive approach than the skill-based approach in Volleyball.

(E) There were no differences between the reported enjoyment of either teachers or students in the modified cognitive approach and the cognitive approach in Volleyball.
Chapter Ten

Discussion

10.1 Introduction

The author as a teacher trainer was intrigued by the teaching games for understanding approach to games teaching. The approach appeared to have a sound educational basis but to the author's knowledge 'physical education' and 'sport' in Hong Kong were unaware of it. At the very least the author felt that teachers should be introduced to the approach if only to produce a more reflective climate toward the teaching of games. Whilst the intention of this chapter is to discuss the results of the main study, it will also serve to outline unique aspects of the work and the conclusions drawn. The main study focused on the reaction of students and teachers to the approach.

10.2 Discussion of Research Design

The shaping of the research identified seven aspects which made the findings unique.

(1) Firstly the project was carried out in quite a different culture to those previously reported. Unlike Europe, the U.S.A. and/or Australia, the physical educators in Hong Kong have received no 'electricity' from the dissemination of the teaching games for understanding movement and indeed have been less affected by 'cognitive' approaches in general. Although the Hong Kong education system has been influenced by Britain, it has its own teaching culture. As mentioned in Chapter Three (section 3.1, p.56), 95% of the population are Chinese, their mother tongue is Chinese and they follow a Chinese tradition. The tendency toward more autocratic/didactic forms of teaching (Butt, 1991) observed by the author would appear to match the 'Chinese' approach and this, together with the language issue, might explain why few educators in physical education and sport had embraced methods like teaching games for understanding.
(2) A second unique aspect of the study was the focus on the 'feeling' toward the approach of the teachers and students. Previous studies had tended to focus on the effectiveness of approaches for learning of techniques and tactics (Booth 1983, Jones 1990, Rink et al 1991). The affective domain had not been reported at the time of the study. It was felt that acceptance of an approach, particularly in a new situation, would be as a result of known effectiveness, together with enjoyment factors and practical issues. It was quite apparent that the author was correct to concentrate on these latter issues, see later.

(3) Using the same group of students for both approaches, whilst controlling for order effect, proved to be an effective way for comparisons. It cannot be denied that a new approach might elicit a positive effect, (Hawthorne effect), but for the purposes of this study the major focus was to see if teachers and students would be content to start working with this approach. The author was convinced that evidence existed for the inclusion of the approach in games teaching in Hong Kong, but was less convinced about the willingness of teachers to try the approach. As will be shown later, teachers whilst recognizing the managerial difficulties, enjoy the approach and so do the children.

(4) Whilst it is recognized that teaching games for understanding should be more reactive to the class, it has to be said that lessons in this study are far more structured than previously reported studies. In one sense this reduces the variables in the experiment and it also gave teachers more confidence. Concerns about management of the class reported by the teacher, would seem to support the author's decision to provide a structure but it is accepted that this may mean direct comparisons with other teaching games for understanding findings may have to be handled with caution.

(5) The use of 8 teachers makes the project unique, the fact that men and women, inexperienced and experienced were used ensures that any findings can be dissected to look for possible interactions. The fact that there was general agreement across
this group, clearly strengthens the findings. Previous research has tended to focus on one or two teachers at most.

(6) This number of teachers clearly allowed large numbers of students to be used. The author feels that in using 420 students from 8 different schools, the information gained fairly represents the views likely to be gained from Hong Kong schools in general. It is important to note, because there are differences, that half the sample were boys taught by male teachers, and half were girls taught by female teachers.

(7) Finally, in questioning the eight teachers at several points throughout the programme, from training workshop to one year after the teaching experience, the constancy of any finding can be well tested. There can be little doubt that certain key points remain constant across the period, these will be discussed in more detail.

10.3 Teachers’ Responses

Since the skill-based approach has been firmly established in Hong Kong, it is crucial to have a thorough understanding of whether it is appropriate or not to introduce the new approach to Hong Kong. Both the teachers’ and students’ responses in this project will serve as an indication for the introduction. Again, it is imperative to point out that after 15 years of dissemination of the new approach all over the world, there is no reason to suspect its effectiveness towards the children. However to enable P.E. teachers to adopt an innovation, it is necessary to know their feelings in advance. If they feel comfortable with it, the result of innovation will be definitely speeded up. In view of this reality, this project is mainly to study the affective aspect of the teachers and students towards this new approach. Discussion will based on the results of two workshops, two trials of teaching and the follow-up interview.

To ensure a smooth implementation and to provide a foundation for this project, a pilot study was conducted. From the results, the students-teachers reflected that they enjoyed the new approach and found no difficulty with it. With their positive feedback, adequate confidence has been firmly established to conduct this project. However, one crucial feedback must not be ignored. They expressed the view that to maximize the
effectiveness of teaching with the new approach, adequate P.E. equipment and smaller
class size up to 35 students were recommended.

10.3.1 The Workshops

In general, it seems that all eight P.E. teachers enjoyed the workshops and to a certain
extent, they had adequate confidence to teach with the modified cognitive approach
and the cognitive approach after the first and second workshops respectively. In
addition, they also believed that the new approach was beneficial to students. At the
same time, they also brought up several concerns and limitations which would hamper
their performance in teaching.

After the first workshop, the two experienced and two inexperienced P.E. teachers in
the Basketball group showed little deviation in viewing the new approach. All of them
reflected that they enjoyed the workshop and could teach the new approach with
confidence. In addition, they also agreed that the new approach was refreshing,
stimulating and interesting which would enable students to learn with enjoyment and
decision making skills. Their positive reflections may come from their own incentive
towards this new approach as well as the detailed information provided by the
workshops. With a well-received briefing and sharing in the workshops, they can
pick up what they need and how to implement it in a game lesson. All their problems
and uncertainties will no longer exist and eventually they can build up their confidence
to teach comfortably with this new approach.

However, there is in contrast, one view from an inexperienced female P.E. teacher
which should be noted, she still perceived that the new approach was not logical as
techniques were being ignored. Such a concern raised by the inexperienced P.E.
teacher is understandable because of their inadequacy in teaching experience. Here the
experienced P.E. teachers have had at least 6 years of teaching experience and they
may no longer be satisfied with the skill-based approach in games teaching. This
explanation is supported by the feedback of the secondary P.E. teachers in Chapter Six
(p. 86) reporting that 47 out of 155 P.E. teachers found difficulties in practising the
skill-based approach. On the other hand, the inexperienced P.E. teachers have not had
adequate experience to identify the weakness of the skill-based approach. Obviously, it is impossible for them to have a drastic change towards the skill-based approach after a two-day workshop. They may, therefore, still have an uneasy feeling if techniques are no longer the central aim of a lesson.

Similarly, in the Volleyball group, both the experienced and the inexperienced P.E. teachers paid more concern to the important role of technique in Volleyball. They were worried about students who could not play without the basic techniques of Volleyball. Their concern may be expected when a comparison is made between Basketball and Volleyball in regard to levels of techniques required in that particular game. If students do not have ample opportunity to practise Volleyball techniques, they cannot play Volleyball because the techniques like dig and set are very specific. On the other hand, the higher level requirement of specific technique may not be a prerequisite in Basketball since passing and receiving in Basketball use the comparatively general skill of throwing and catching. Students may not have any serious technical problem in learning Basketball. However, Bunker and Thorpe (1986) advocated that students can play and enjoy the game without having achieved high levels of technique and indeed propose a starting Volleyball game based on throw catch with, for mixed abilities, a second game in which players have the option to catch and throw, or to strike.

Furthermore, it is really difficult to define the word ‘well’. In terms of techniques, if students cannot master a certain level of techniques, they, of course, will not be able to play Volleyball well. As a result, they will not obtain any enjoyment from the full game. Moreover, from another perspective of ‘enjoyment’, the answer is entirely different. The new interpretation may be that the students need not play technically well but they still obtain enjoyment from the game.

What had happened after the first trial of teaching? How was their opinion influenced by their teaching? Had they acquired a new perspective on the cognitive approach? All the above questions were addressed in the second workshop. Interestingly, there was an impression in the second workshop that the four P.E. teachers teaching
Volleyball gave different views on the new approach to those offered after the first workshop.

After the second workshop, they reflected that they enjoyed the new approach and had more confidence to implement it.

Unlike the first workshop, their worry and concern no longer focused on the important role of technique. They did not even mention it in the questionnaire. It is reasonable to accept that they have changed their views on this new approach. Obviously, they viewed the cognitive approach with a new impression perhaps because they had started to understand as a result of the first trial teaching that technique is not ignored in the new approach but it will be taught when it is needed (Bunker & Thorpe, 1986).

Here, their concern shifts from technique to the duration of practising activity. One inexperienced P.E. teacher expressed the view that the duration for 1 Vs 1 activities was too long. Perhaps, it is arguable since such formation is a basic and simple way to practise the cognitive approach. In fact, it is a good formation in the sense that all students are involved in the game situation without wasting their time in queuing up. All of them have adequate opportunity to practise how to create and deny spaces and even win a point. Of course, 2 Vs 1 or 2 Vs 2 formations can provide the same effect as 1 Vs 1. Moreover, when comparisons are made, it seems that 2 Vs 1 or 2 Vs 2 are more complicated and students will find it more difficult to practise at the initial stage. Even so, it may be that the author’s desire to guide the teachers over powered their ability to change the pace of development of the lessons, which is recommended in teaching games for understanding.

As mentioned earlier in the first and second workshops, the P.E. teachers pointed out the limitations during implementation which might hamper the effectiveness of the new approach. In the first workshop, both the experienced and inexperienced P.E. teachers indicated that the inadequacy of P.E. equipment and sports ground as well as the large class size would hamper the outcome of implementing the new approach. Their concerns are valid and reasonable because more equipment and sports grounds are
needed when compared with the skill-based approach. Unlike the schools in England, the area of sports grounds in Hong Kong is smaller but the class size is greater. This is supported by the results in the pilot study (see Chapter Seven) that two P.E. teachers faced the same constraints during their teaching. To overcome these constraints and facilitate the effectiveness of two trials of teaching, the class size was reduced from 40 to 35 students in one class.

In the second workshop, one limitation was reflected by one inexperienced P.E. teacher who needed more opportunities for familiarization with the new approach, and more diagrams to illustrate the lesson plans. It seems that the inexperienced ones managed pretty well in the first trial teaching with adequate support of P.E. equipment and smaller class size. Subsequently, they could overcome the limitation mentioned after the first workshop. As a result, they shifted to other constraints such as the inadequacy of provision of time and clear lesson plans, etc. These constraints, in general, are practical and solvable because more time will aid understanding and better lesson plans can be designed to facilitate the implementation of the new approach effectively.

From the above feedback, there is an impression that two workshops do serve as a foundation for the P.E. teachers to acquire better understanding of the modified cognitive approach and the cognitive approach. Their understanding of the new approach to ensure positive and constructive effects increases during implementation.

10.3.2 Two Trials of Teaching

There are two trials of teaching to understand the feeling of the P.E. teachers during their teaching of Basketball and Volleyball with three different approaches, the skill-based approach, the modified cognitive approach and the cognitive approach. From the main trial, the original intention was to study the teachers’ responses of two groups (Basketball and Volleyball) in a global way and then follow this by studying each group separately. As mentioned in the results chapter (see Chapter Nine), there was no homogeneity between two groups of Basketball and Volleyball. It is, therefore, not appropriate to group for statistical calculation. In that case, separate investigation
of the data for both groups needs to be carried out. No significant differences are found in the Volleyball group, but this is not the case in the Basketball group in which significant differences are computed in two dimensions with two different variables.

The first significant difference was found in the Interest-enjoyment dimension between the modified cognitive approach and the skill-based approach. The teachers of the Basketball group reflected that they enjoyed adopting the modified cognitive approach (t value 3.29 at p<0.05). The significant results indicated that the new approach was welcome and supported by the P.E. teachers. There is no doubt that the modified cognitive approach is new and challenging. However, the most important point is that the new approach meets their needs. People need new things particularly when they have difficulties with the existing situation and are 'personally' dissatisfied with aspects of their teaching. This response is termed as self-accountability by Siedentop (1983) who stated that

> the professional teacher is specially and overtly accountable to him or herself for good teaching. Self-accountability is the essence of professionalism.

(Siedentop, 1983 p.234)

Such is the attitude of the P.E. teachers in Hong Kong. They need a new approach for good teaching because they have difficulties with the skill-based approach which has been mentioned earlier (p.86). In addition, further evidence can also be identified in the follow-up interview that one experienced P.E. teacher teaching Basketball felt unhappy with the skill-based approach.

Based on these findings from the P.E. teachers at secondary schools and in this project, they need a new approach from which they can find enjoyment in it. Their positive attitude towards it will provide a further step to facilitate its introduction in Hong Kong.

In addition, another significant difference was found in the dimension of the Perceived-competence between the experienced and inexperienced P.E. teachers. The result
indicated that the experienced P.E. teachers (mean 15.00) felt more competent with the new approach than the inexperienced P.E. teachers (mean 13.25) with t-value 7.00 at p<0.01 level. This is an expected result because the experienced P.E. teachers can teach well since they have longer years of teaching experience. As the concerns about the new approach are largely managerial, i.e. space, numbers, equipment, not surprisingly inexperienced teachers were less confident. An example is cited by Siedentop (1983) that the experienced teachers can give effective and substantive feedback but the inexperienced cannot. Siedentop (1983) remarked that

experienced teachers usually have somewhat different patterns of teaching especially in that they appear to give more feedback than do less experienced teachers, and that feedback is more substantive.

(Siedentop, 1983, p.64)

In view of their better experience, the experienced P.E. teachers, of course, feel more competent, not only with the skill-based approach, but also with the new approach. Comparatively, the inexperienced P.E. teachers are in an inferior position. They are at an initial stage to gain experience for managing the skill-based approach. How can they show better confidence in the new approach? As Fullan (1993) stated that confidence breeds competence, the experienced P.E. teachers can demonstrate better competence in the new approach than the inexperienced ones.

For the second trial of teaching (cognitive approach) of the Volleyball group, two significant differences are found. Firstly, the inexperienced P.E. teachers showed that they had put more effort (t value 4.70 p<0.02) into the modified cognitive approach and the cognitive approach than the experienced ones. Following the previous discussion in the main trial teaching, the inexperienced P.E. teachers realized that they were in an inferior position than the experienced ones. The consequence is that they need to put in more effort with the cognitive approach in order to compensate for their inadequacies in teaching experience. One of the examples given by Siedentop (1983) reviewed that
the first year of teaching is often complex and even bewildering. There is never enough time to prepare. What you thought was adequate preparation turns our seldom to be exactly that.

(Siedentop, 1983 p.220)

Conversely, the experienced ones have competence in both the modified cognitive and cognitive approaches. With good managerial skills, less effort may be necessary by the experienced ones. Again, this result may remind us that during the introduction, the inexperienced P.E. teachers must not be ignored because they will work harder to compensate for their inadequacy in teaching experience. In fact, there need not be any discrimination based on teachers' teaching experience. All of them must be treated equally and be invited to join in this introduction.

Secondly, significant difference is also identified between the female and male P.E. teachers in the Effort-importance dimension of the traditional approach and the cognitive approach (t value 3.40 p<0.05). The results indicated that the male had put in more effort and treated the new approach as more important than the female.

Gender is an important issue to be addressed and discussed here. Numerous studies have been conducted to investigate the difference between male and female P.E. teachers in their teaching behaviour (Cheffers & Mancrini, 1978; Cheffers & Lombardo, 1979; O'Sullivan, 1985; Hickey, 1985). In one study, Spackman (1986) devised an observation system based on Anderson's (1974) work to describe teacher behaviour. Some intra-individual variation in the teaching behaviour of three male teachers was reported, together with some significant difference between male and female teachers in the management and teaching of games. However, in the overall analysis, Spackman (1986) stated male and female teachers across all the activities and age groups did not show any significant differences in their managerial and teaching behaviour examined collectively.
In fact, there is no controversy between the significant result here and other researchers because both the female and male P.E. teachers adopted two different approaches whereas the other researchers studied only one approach. It is not so surprising to obtain significant difference. In this project, a new approach is adopted and must have put pressure on both the female and male P.E. teachers. In general, all of them have equal opportunities including attending the same workshop, teaching their own students, using the same lesson plans, and having the same class size of 35 students respectively. The only deviation is on their attitude towards the new approach. Those who perceive the new approach as important will put in more effort. In other words, the male teachers may have a more positive attitude than the female teachers towards the new approach. This assumption is supported by the feedback from the students’ responses in which the students reported that they obtained more enjoyment from the male teachers than the female teachers but it is important to remember that the responses were from girls taken by female teachers and boys taken by male teachers. Therefore gender differences cannot be attributed just to the teachers. Details will be discussed in the latter part of this chapter.

Apart from the above two significant differences, the key discussion here is that there is no significant difference between two different approaches, the cognitive approach and the modified cognitive approach, therefore, the null hypothesis is accepted (see Table 2). As mentioned in Chapter Eight (section 8.5, p.107), the modified cognitive approach comes from the modification of the cognitive approach to suit the different teaching culture of Hong Kong. To enable P.E. teachers to accept the new approach comfortably, the format and procedures of the cognitive approach has been changed but its philosophy and rationale remain the same. Importantly, the implications here for introduction of the new approach may be that the teachers in Hong Kong can adopt the cognitive approach directly. All of them feel comfortable and happy with the cognitive approach and it is not necessary to have a ‘by-pass’ stage - the modified cognitive approach.
10.3.3 The Follow-up Interview

Change is all around us and purposeful change is the new norm in teaching (Fullan, 1993). After one year of implementation, the follow-up interview was specially designed to study the influences of the new approach on the 8 P.E. teachers. It is meaningful and innovative in the sense that no one has revisited teachers after such a time lapse and therefore it becomes one of the unique features of this project (section 10.2, p.161).

a. The Basketball group

In the Basketball group, the first question asked - in what way did the teaching games for understanding influence them? The four P.E. teachers replied that they had changed because they perceived the new approach was refreshing, stimulating and beneficial to students. One inexperienced male PE teacher claimed that he had made a significant change while the rest three indicated that they had changed slightly. Based on their explanations, the answer ‘changed slightly’ means that they, sometimes, taught techniques instead of tactics.

The results reflected that they had received different influences from this new approach within the one year of time. With reference to the last year’s feedback of the workshop, it is interesting to learn that their belief in this new approach has not changed. They still believe that the new approach is refreshing, stimulating and beneficial to students. Although Butler (1996) expressed the view that there was no definite correlation between the belief of the teacher and teaching approach, it may probably be one of the incentives which enables them to continue the practice of the teaching games for understanding approach because their existing belief was originated from the skill-based approach and then started to change after the workshop.

While it was not possible to find a clear correlation between the beliefs of the teachers and their teaching methodologies, there was evidence that traditional beliefs inhibit change towards TGFU.

(Butler, 1996)
In the second question inviting them to identify ways in which teaching games for understanding had influenced them, they expressed the view that they changed their teaching approach and concept on games teaching. From their responses, they reflected that they started the lesson by teaching games, rules and then followed by tactics. Techniques only played a minor role in the lesson. It is also encouraging to observe that there is a remarkable change in their perception of technique. Previously, the inexperienced P.E. teachers expressed the feeling in the first workshop that the new approach was not logical as techniques were being ignored in a minor role. At present, they have changed to the extent that three of them have made significant changes and only one, sometimes, teaches technique as a separate unrelated element.

In response to the change in concept, it seems that after one year of practice, all of them have acquired a better understanding of the approach particularly on the relationships between the game, tactics, techniques and enjoyment. They are re-assured that more enjoyment can be generated for the students who can learn the game with different abilities and at their own pace. This is further supported by the next question.

To understand what the good things of the new approach are, question three invites them to express their views. They listed several good things as below

1. Students can learn with more enjoyment.
2. Students can participate actively in the game.
3. Students can learn how to play the game.

The above findings reflected that they had experienced and recognized the benefits of the new approach towards the students. Besides that, it is, however, so innovative that one experienced female PE teacher pointed out that this new approach could help teachers to identify student leadership. Although her idea has not been advocated or claimed by the Loughborough team, it must be accepted as one of the good things, because through the practice of different games and tactics, students are frequently exposed to take the lead through discussion and exploration within the group.
Eventually, they will be easily identified by teachers. Of course such a finding is related to ‘empowerment’ which is central to much of this work.

In addition to the good things, the four P.E. teachers were also invited to reflect their views on the weaknesses of the new approach. From the teacher’s perspective, three out of four P.E. teachers pointed out that when compared with the skill-based approach, the teaching games for understanding approach created a poor class control situation. Similar findings were also reported by Butler (1996) who studied teacher’s responses to teaching games for understanding.

The technical model offers greater control over students. Students wouldn’t learn ‘the right way’ to do things, because teachers would not be in control.

(Butler, 1996, p.19)

Their reflection on poor class control is expected because the new approach shows a change in focus from order, control and teacher-centred interactions to student understanding through problem-solving and exploration set by the teacher.

Another weakness expressed by one inexperienced male P.E. teacher was that the new approach would hamper the technical development and performance of students in the game. To overcome this weakness, he suggested teaching some techniques before the game. Incidentally, his concern is also similar to Butler’s observation:

Students need to learn skills before they can play the game.

(Butler, 1996)

Interestingly, he replied to question one that he had made significant changes within this year. However, his previous answer is a little bit contradictory with the present view on the weakness of the new approach. It seems that he may probably have misunderstand the role of technique in the new approach. Perhaps, he may think that technique is the ‘devil’ of the new approach so one never teaches technique in the new
approach. If this assumption is correct, he has misinterpreted like some P.E. teachers in England in the early work (Bunker & Thorpe, 1986). There is no doubt that his misunderstanding comes from a limited knowledge of the new approach in Hong Kong. This point reflects that the teaching games for understanding information is inadequate in Hong Kong. Further evidence to support and verify such inadequacy of information can be echoed in the next question.

The four P.E. teachers expressed the feeling that students might have an inferior position in techniques and have a feeling of learning little in the lesson. This is true that the new approach puts students who are familiar with the skill-based approach at a disadvantage because the focus of the lesson has been changed from executing techniques to understanding tactics (Butler, 1996). To have a closer understanding on their views, the findings in Chapter Nine reflect that the teachers' feeling mainly come from their observations of students' playing in the game. It is reasonable to expect that students cannot play so well as before in terms of prescribed technical performance. However, it must be reiterated again that the emphasis of the teaching games for understanding is on enjoyment, tactical understanding and on evoking motivation to wish to learn skills (Bunker and Thorpe, 1986).

In response to the student's feeling of nothing to learn in a lesson without emphasizing the learning of techniques, it is understandable that they do have a sudden change of learning approach from the skill-based approach to the teaching games for understanding approach which is entirely different from what they have practised since their primary education. Butler (1996) observed that

students are unable to change if they have a skills background.

(Butler, 1996)

The students have already got used to the skill-based approach and learning techniques cannot be segregated from games lesson. In fact, it may arrive at a circumstance that it is unacceptable to have bread without butter. It is, therefore, inappropriate to invite them to change suddenly in a way to accept a new approach without emphasis on
techniques. As a result, no technique element in a lesson may generate a feeling of nothing to learn.

Regarding the problems they faced, they expressed their concerns differently as below.

1. Inadequate information and teaching materials.
2. Inadequate provision of sports grounds and PE equipment.
4. Incapable of assessing students objectively.
5. Incapable of assessing students objectively.
6. Uncertain view of PE inspectors.
7. Negative impression of the new approach from the headteacher.

Interestingly, it is possible to observe from the above items that they have changed. Their perspectives and concerns become wider after one year of teaching. Previously, after the workshop their concerns were limited to the inadequate provision of sports grounds and PE equipment, and inappropriate evaluation methods. However, after one year of teaching, they start to be aware of more problems with assessment, poor class control, the uncertain view of PE inspectors and headteachers which are extremely fundamental and crucial to them. Note also that the concerns are not about the 'children' but more about their management skills. It is encouraging to hear their concerns because the more the concerns, the better the understanding of the new approach. Ultimately, their concerns will facilitate the smoothness of the introduction of the new approach to Hong Kong.

One crucial problem on the negative view of the headteacher must be highlighted here. Four of them raised the problem. Their concern is about the change of teaching approach in games lessons. This change will lead to poor class control. They reflected that such change would result in a negative impression to the headteacher on their teaching performance. This negative impression would gradually have an adverse effect on their teaching career and even job security. It is really a practical problem for teachers. The key issue here is that the headteacher has an impression that students
must be taught properly and orderly in a games lesson and P.E. teacher must teach techniques. Such impression comes from a games lesson taught with the skill-based approach. Subsequently, this impression will become a yardstick to assess teacher's teaching ability. However, this is not a real case for the teaching games for understanding approach. As mentioned earlier by Butler (1996), a teacher may have less control of students in the new approach. Since the headteacher does not understand the characteristics of this new approach, a negative effect will gradually be generated. Consequently, although teachers may have a positive attitude towards the new approach, they may not practise it in the games lessons.

To overcome their worry, they were asked to make some suggestions. They proposed that the best way was to introduce the new approach to their headteachers by themselves together with P.E. inspectors. Positively, this is a direct and effective solution. As the approach is based on sound educational evidence, it should not be difficult to convince the headteacher.

To understand the help offered to P.E. teachers, they suggested a number of concerns which were mainly related to the problems they had faced previously. One interesting suggestion by two experienced P.E. teachers was the need to change the P.E. curriculum rather than just see this as a change of approach. Their view is also supported by Butler (1996) who stressed that

a model TGFU curriculum should be prepared so that teachers can be given a concrete idea of what it would involve in terms of structure, organization and time frame.

(Butler, 1996)

In the long run, their suggestion is a 'must'. To implement the new approach successfully, the change of games curriculum is the fundamental task to be achieved. The main reason for that change is because teachers can use it as a reference and back-
up to implement teaching games for understanding effectively as well as to change their philosophy on games teaching.

b. The Volleyball Group

In the Volleyball group, the first question asked was - In what way did the new approach influence them? - All four of them reported that they had changed since the first workshop. However the two inexperienced ones expressed that they, sometimes, taught techniques in the lesson, perhaps because of lack of confidence. Referring to the feedback of the first workshop (p.117), it is also interesting to observe the feelings of the experienced and inexperienced P.E. teachers. In the first workshop, one male experienced P.E. teacher expressed his worry that students would not master the techniques in the game. After one year, this worry had disappeared perhaps as he saw the place of skill in the game. Even so the two inexperienced teachers were still concerned about the need to teach technique.

This assumption is further supported by the feedback of the second workshop and two trials of teaching. From the second workshop, he did not express his concern about technique again but he continued to criticize the duration for 1 Vs 1 practice and the author accepts (see earlier) the need for teachers to move on when they feel ready. In the two trials of teaching, there was no significant difference found in the main trial but not in the second trial. In the second trial, significant difference was found between the female and male in the Effort-importance dimension. The results indicated that the male had put in more effort to treat the new approach as more important. Again, this significant finding may verify the point that having a concern in mind, one puts greater effort to overcome this worry. Therefore, through practice in the main and second trials of teaching, plus one whole year of implementation, views have undergone change.

However, this is not the case for the inexperienced PE teachers who had reported in the first two workshops that they had adequate confidence to implement the new approach subject to the provision of lesson plans in hands. After one year of practice, they reflected that sometimes, they taught techniques because they still had inadequate
confidence to teach with the new approach. However, it was reported earlier (see Table 10) in the second trial of teaching that the inexperienced P.E. teachers had put in more effort (t value 4.70 p<0.02) than the experienced ones in their teaching. With this significant result, the inadequacy of confidence must not be due to their inadequate effort during teaching. The underlying reason actually lies in their inexperience of teaching which might expose their inability to manage poor class control or indeed their fear that they might not be able to. This reason would be further elaborated in the latter part of the interview results.

The second question is to invite them to identify the ways which the new approach has influenced them. Like the Basketball group, they reported that they had made changes in their teaching approach and concept of games. However, they expressed rather differently from the Basketball group in the concept of games. They perceived a game as a problem from which students were encouraged to tackle and solve it by adopting different tactics. Through this process, students had more opportunities to get involved in their own decision making (Butler, 1996) and their cognitive experiences were eventually developed. At this stage students could learn at their own pace and ability. Enjoyment would follow subsequently.

In another question inviting them to list the good things of the new approach from teacher’s and student’s perspectives, they reported several good things as below

1. Students can learn at their own pace.
2. Students can develop their cognitive experience.
3. The TGFU is refreshing and stimulating.
4. The TGFU can generate less confrontation between teacher and students.

The above good things are quite similar to the Basketball group. They recognize the benefit of the new approach towards the students after one year of practice. However, it is interesting that one experienced male P.E. teacher stressed that the new approach generated less confrontation between teacher and students. From his response, it is found that his experience comes from teaching a class with a large group
of mis-behaved students. Previously, he taught a games lesson with the skill-based approach which was very rigid. Butler (1996) summarized this teaching style as

there was usually little time for students to practise, and most students performed the skill only two or three times. Students made very few verbal contributions, usually initiated only by teachers questions. Managerial questions focused the student on the task and on teacher’s directions.

(Butler, 1996, p.18)

After adopting the new approach, he found that students were highly motivated in learning and with great interest in the game. Owing to their active involvement in the lesson, he had less confrontation with them.

It is true that there may be more confrontation between teacher and students in the skill-based approach. Normally, those who are not so well behaved, do not want to be bound in practising the techniques in the lesson. They always perform uncooperatively with the teacher. In addition, their mis-behaviour, sometimes comes from the dissatisfaction of the content of the lesson. They may have a feeling that the technique is dull or without any challenge. As a result, they do not follow the teacher’s instruction to learn techniques. Ultimately, confrontation appears which the teacher cannot tolerate.

On the other hand, this is not the case for the new approach. The roles of teacher and students are changed in the teaching games for understanding approach. More interactions appear within the group of students. Butler (1996) expressed that

students were able to spend time involved in small group interactions rather than the limiting teacher/student interactions found in the technical lessons.

(Butler, 1996, p.18)
In the new approach, students are highly motivated to learn in the sense that they have more flexibility in learning and are encouraged to talk, to discuss and to make decision in the lesson. They are always engaged in the game and confrontation between teacher and students will be eventually reduced.

In response to the student’s perspective, all P.E. teachers agreed that students could obtain more enjoyment from the new approach because they could learn at their own pace and abilities. Again, their belief is also reported in the first workshop and supported by the students’ responses in the two trials of teaching. Significant results in the main (F value 47.23) and second trial of teaching (F value 67.24) indicated that the students gained more enjoyment in the new approach than the skill-based approach. This is extremely important in any learning process for students can learn independently with their own abilities. However, this is not the case for the skill-based approach, students might have physical difficulties which will hamper their learning of techniques (Bunker & Thorpe, 1986). In fact, technique is so mechanical that it may be meaningless to them.

Apart from the enjoyment aspect, all P.E. teachers listed out two more good things of the new approach; students’ knowledge of how to play the game and making appropriate responses in the game situation. A similar view can also be found in the second workshop. It may imply that after the main trial of teaching, they started to realize that the new approach does provide this benefit for students. Subsequent to the second trial of teaching, together with one year of practice, their view has been reinforced and then further supported in the follow-up interview.

On the other hand, when asking about the weaknesses of the new approach from teacher’s view, they reported similar results as the Basketball group as listed below.

1. Incapable of controlling the class in an orderly way.
2. Incapable of assessing students’ performance objectively.
3. Students cannot play well, in the game.
Again, like the Basketball group, their view is strange because the new approach does enable the focus to change from a concern with control to a concern with student understanding and learning (Butler, 1996). Their concern has not been mentioned in the two workshops but after one year of practice, they start to realize this is a problem that they need to handle. Owing to their limited teaching experience, these two inexperienced teachers felt they may not be able to manage it so well. Their inability to manage the class may give adverse effect to the students. This assumption can be evidenced in the students’ responses that the students in the two trials of teaching did not obtain as much enjoyment in the games lesson taught by the inexperienced P.E. teachers. Further details about poor class control will be discussed in the next question on problems that teachers faced.

In addition, the experienced ones pointed out another two weaknesses in the method of assessment and student’s poor performance in the game situation. To assess student’s performance objectively is an important issue for all P.E. teachers since they need to submit students’ school results twice a year. Comparatively, the skill-based approach is far easier to quantify; technique is easy to assess. As Butler (1996) stressed that

\[
\text{the execution of skills is more easily evaluated than the concepts of TGFU.}
\]

(Butler, 1996)

Conversely, the new approach emphasizes the game and tactics which are rather difficult to assess objectively. At this stage, they have inadequate confidence to assess students. What is needed is an objective guideline to assess students’ performance in the lesson with the teaching games for understanding approach.

From the Volleyball student’s perspective, all of them pointed out the same weaknesses as the Basketball group such as students having a feeling of being inferior in the game and nothing to learn. However, it is interesting to discuss one of the weaknesses mentioned by two experienced P.E. teachers that the new approach cannot cater for different students with different abilities. They expressed their feeling that
some skilful students might feel rather disappointed while the low ability ones viewed it with challenge. To a certain extent, this weakness must be noted but their concern can also be found in the skill-based approach. However, their reflection may indicate that they do not have adequate understanding of the new approach. The teaching games for understanding team at Loughborough have developed programmes to show how this can occur within a specific game situation and indeed in some cases skilful students will be encouraged to make their own game to challenge (Almond, 1986). Through making their own games, new game situation will appear. No matter how skillful they are, they are always challenged when faced with a new game situation.

In response to the problems which they have faced within the year, all four Volleyball teachers pointed out that they had inadequate information and teaching material about the new approach. Their reflection is matched with the P.E. teachers of the Basketball group who perceive this issue as a weakness of the new approach. Of course few would have access to or completely understand ‘English’ texts.

As class control was a concern for all the teachers, it is worth a little more thought. They expressed the feeling that they taught techniques sometimes because they had inadequate confidence to teach with the new approach. As Butler (1996) reported that the new approach offered less control over students, this situation would clearly challenge their teaching ability in class control. Because of their limited teaching experience, they will have a hard time in facing it. In addition, Fullan (1993) also expressed that

\[ \text{the beginner is not experienced enough with the variety and needs of students.} \]

\[ \text{(Fullan, 1993, p.15)} \]

Once they cannot manage the class properly, they may prefer to teach techniques rather than practise the new approach. Their shifting from the new approach back to the skill-based approach is mainly to avoid, on one hand, a chaotic class with discipline problems, and on the other hand, giving a negative impression to the headteacher or other colleagues.
The uncertain view of PE inspector was also reported by the inexperienced P.E. teachers. Understandably, this is not a separate issue with the poor class control problem. Their concern is valid and practical. Owing to their inability to manage the class in an orderly way with the new approach, they expressed concern about the consequences when the P.E. inspector has a negative view toward the new approach during inspection.

When asked in the last question what help do P.E. teachers need for the new approach, the Volleyball group shared similar reflections with the Basketball group. Their concerns were on the provision of adequate information, lesson plans and handouts about the new approach as well as organizing more workshops, seminars and conferences for the P.E. teachers. Their concerns are vital and practical to teachers because the teaching games for understanding approach is new to Hong Kong. If they want to implement it, they must need, at least, more information about it to facilitate their understanding on this innovation before any practice. As Fullan (1993) stressed that

\[ \text{it has long been known that skill and know-how are central to successful change.} \]

(Fullan, 1993, p.16)

10.4 Students’ Responses

Teachers obviously have a central role to play in P.E. lessons. Varstak et al (1983) recommended not talking about teacher behaviour and teaching separately from student behaviour and learning, but instead to talk about teaching - learning behaviour together. Furthermore, Underwood (1988) also remarked that the behaviour of the teacher has an effect on what the students do because of this close interrelationship.
In general the students' results are very encouraging and positive. The students commented that they enjoyed the new approach. Interestingly, the responses from the students in the pilot study are supportive to the teachers' responses whereas this situation cannot be found in the main and second trials of teaching. Such different outcomes may come from the large sample size of the students. Apart from the pilot study, there are in total 280 and 140 students involved in the main trial teaching and second trial teaching respectively. With such a great representation, the reflections of the students do give a genuine view of their feeling on these comparisons.

From the feedback of the pilot study, the students reflected that they felt comfortable with the new approach and really enjoyed it because they knew more about the game and more fun could also be obtained. Furthermore they could learn at their own ability in the lessons. In addition, they could also give appropriate reaction in the game. Their enjoyment from the approach not only paved the road for the subsequent project but is also supported the student-teachers' view on this new approach.

In the main trial of teaching, significant results were identified between the two different ball games (F value 27.62 p<0.01), the different teaching approaches (F value 88.39 p< 0.01), different teaching experience (F value 28.39 p< 0.01) and different genders (F value 25.04 p< 0.01) in the two groups (Basketball group and Volleyball group). The findings that all enjoyed the new approaches but that boys taken by male teachers, enjoyed all situations more than the girls, are perhaps not surprisingly when one considers that games and indeed sports, have been more traditionally associated with maleness than femaleness. It is the author's opinion that this is even stronger in Chinese culture than in Western cultures.

Referring to the feedback in the first workshop, the P.E. teachers of the Volleyball group expressed their concern that the students could not play well without practising techniques in the game of Volleyball. Perhaps, their concern is valid due to the request for a higher level of Volleyball technique in the game when compared with Basketball. The basic and required technique to play the game in Volleyball, for example, is underhand digging which is more complicated when compared with the fundamental
technique of passing in Basketball. Obviously, the students can demonstrate the tactics of Basketball more smoothly and effectively without needing a higher level of techniques. As a result, they will play more happily in the Basketball game. This may probably be one of the reasons why the students felt more enjoyable in Basketball.

The fact that the students enjoyed Basketball more than Volleyball might be a reflection of the ‘free flowing’ nature of the game, more competence in the basic skills, etc. However, perhaps the students sensed the discomfort of the teachers. Both the female and male P.E. teachers, even those with little teaching experience, reported that they had adequate confidence to implement the modified cognitive approach in Basketball - and students enjoyed Basketball - which seems to support the argument that teaching behaviour might be affecting learning behaviour (Varstak et al, 1983).

Of course the reverse happens. Although most of the feedback from the students is restricted, it is supported by the teachers’ responses, several significant results of the students’ feedback, in general, can be reflected in the teachers’ responses during separate investigation of the individual group of Basketball and Volleyball.

The students obtained more enjoyment in the Basketball lesson taught with the modified cognitive approach (mean 34.87) than with the skill-based approach (mean 42.82). Why did they enjoy the cognitive approach? Their enjoyment may come from the approach which provides opportunity for them to understand the game and learn tactics at their own ability. Through understanding the game, they know how to play the game and are also exposed to different problems without requiring a higher level of technique. In addition, their positive reflection towards the new approach is also mirrored by the teachers’ responses in the Interest-enjoyment dimension. The teachers expressed the feeling that they enjoyed teaching with the modified cognitive approach so as mentioned earlier this ‘rubs off’ on the students. As explained earlier in this chapter, the four P.E. teachers in the main trial of teaching shared a similar feeling with 30.4% secondary school P.E. teachers who have dissatisfaction with the skill-based approach. What they look for is a new approach which can meet their needs in games teaching. After attending the workshop, they reported that the teaching games for
understanding approach would help them. With their belief, interest and confidence in the new approach, they put more effort to experience it and eventually appreciate the benefits of this new approach, particularly for students. They end up enjoying their teaching, the students end up enjoying the learning.

The second significant difference, which is also supported by the teachers' responses, is that the students enjoyed the lessons taught by the experienced P.E. teachers. Nobody will disagree that an experienced P.E. teacher can teach the lesson effectively and in return the students enjoy it. Significant results reflected that the experienced P.E. teacher were better than the inexperienced ones in adopting the modified cognitive approach. Basically, the main difference rests upon the level of competence of the teachers. That means the experienced P.E. teachers in this project have more competence in adopting the new approach. As a result, the experienced P.E. teachers teach the students more effectively and the students eventually felt that they obtained more enjoyment in the lesson taught by the experienced P.E. teachers.

However, it is worth pointing out that both the experienced and inexperienced P.E. teachers in the first workshop perceived and reported that they had adequate confidence to implement the new approach. There is no doubt that confidence breeds competence (Fullan, 1993). After the first trial of teaching, the outcome is different. That may imply that their competence is influenced by their teaching experience. In other words, teaching experience will build up teaching competence.

The result of the third significant difference on gender showed that the boys felt more enjoyment in the Basketball lesson taught by the male P.E. teachers (mean 35.63) than the girls taught by the female P.E. teachers (mean 42.06). Although this significant difference is not supported by the teachers' responses, it is interesting to highlight here for discussion its interaction effect. A two-way interactions was found between different experience and different genders. The result indicated that the boys acquired more enjoyment in the Basketball lesson taught by the experienced male P.E. teachers (mean 30.94). Based on the above explanation of the second significant difference on different experience, it is reasonable to accept that owing to the competence of the
experienced P.E. teachers, the students can learn with enjoyment from the lesson. However, it is a regret that no support is identified from the teachers’ responses in the workshop, in the first trial of teaching and even from the follow-up interview.

In the Volleyball group, two significant differences were computed in between different approaches and in between different experiences. In addition, three two-way interactions were also found (1) in between different approaches and different teaching experience, (2) in between different approaches and different genders, and (3) in between different teaching experience and different genders. Unfortunately, some significant differences are only supported by the teachers’ responses from the workshops but not from the main trial of teaching.

There is no doubt that the enjoyment of the students comes mainly from the best performance of the teachers. In the first workshop, the teachers indicated that they had adequate confidence to teach the lesson with the new approach. In addition, they also believed that the new approach was interesting, refreshing and stimulating. With their belief and responses towards the new approach, they will treat the lessons seriously and put greater effort to implement it effectively.

A closer investigation of the student’s questionnaire, the answer to the students who have more enjoyment with the modified cognitive approach can be found. They reported that they knew more about how to play the game and could perform appropriate response in the game situation. Inevitably, they can get fully involved in the game without bothering about their ability to learn techniques and fun will eventually be generated through the game. Conversely, this is not the case for the skill-based approach. Most of them, particularly those with low ability, cannot learn techniques properly and cannot even perform properly in the game situation. Under this circumstance, how can they obtain enjoyment from the lesson?
To address the significant difference that the students obtained more enjoyment in the lesson taught by the experienced P.E. teachers, it is again appropriate to refer to the responses from the first workshop. The comparison indicated that the experienced P.E. teachers had more confidence than the inexperienced P.E. teachers to implement the new approach. It is, therefore, the experienced P.E. teacher had taught better and would generate greater enjoyment to the students.

From the two-way interactions, the first result indicated that the students felt more enjoyment in the Volleyball lesson taught with the modified cognitive approach by the experienced P.E. teacher. In addition, the second finding showed that the girls found more enjoyment in the Volleyball lesson taught with the modified cognitive approach by the female P.E. teachers. The third result pointed out that the girls obtained more enjoyment in the Volleyball lesson taught by the experienced female P.E. teachers.

It is tempting for the author to suggest that the less 'boisterous' activity taught with less demands on 'physical' components might be attractive to females in Hong Kong. Also the less autocratic style of teaching may also appeal - but this is a project for future research.

It is interesting to see responses to the modified cognitive approach and the cognitive approach, in fact a similar finding was seen in the teachers' responses. In addition, there is no significant difference in students' enjoyment between these two different approaches. Unfortunately, because of the design, we cannot be sure whether there is no difference between the more structured 'modified cognitive' approach and the 'cognitive' approach as a suitable starting point. The fact that the teachers had had the 'modified' workshop and teaching experience before being introduced to the 'cognitive' approach may have helped the feeling of comfort. It is, however, the author's opinion, that the teachers would be able to go straight into the cognitive approach and this will be used in the future.
After discussing the teachers' responses and the students' responses, it is time to address the question 'Is it appropriate to introduce teaching games for understanding to Hong Kong from the findings of the main and second trial teachings?' Based on the positive and encouraging evidence from 8 P.E. teachers and 420 students, the author would say 'YES'.

10.5 Summary Table of Research Hypotheses

To address the research hypotheses set for this project, a summary table is used to list the results of these hypotheses. Three out of five show significant differences in the students' responses but not in the teachers' responses. No significant difference can be found in the teachers' responses because there are no homogeneity between two groups of samples (Basketball and Volleyball). As a result, no further statistical investigation has been carried on. Alternatively the fourth one shows significant differences in both the teachers' and the students' responses while the last one shows no significant difference in both the teachers' and students' responses. In conclusion, the null hypothesis is partly accepted for the first three hypotheses, but is rejected for the fourth hypothesis and is completely accepted for the last hypothesis. Details are as follows.
### Research hypothesis (A)

There is a significant difference existed between the students' responses on adopting the traditional approach and the modified cognitive approach to teach Basketball and Volleyball, but no further statistical investigation of the teachers' responses has been carried on due to homogeneous problem.

### Research hypothesis (B)

There is a significant difference existed between the students' responses on adopting the traditional approach and the modified cognitive approach to teach Basketball and Volleyball, but no further statistical investigation of the teachers' responses has been carried on due to the homogeneous problem of two groups of samples.

### Research hypothesis (C)

There is a significant difference existed between the students' responses on adopting the traditional approach and the modified cognitive approach to teach Basketball and Volleyball, but no further statistical investigation of the teachers' responses has been carried on due to the homogeneous problem of two groups of samples.

### Research hypothesis (D)

There are significant differences existed in the teachers' and the students' responses between the traditional approach and the cognitive approach on the teaching of Volleyball.

### Research hypothesis (E)

There are no significant differences existed in the teachers' and the students' responses between the modified cognitive approach and the cognitive approach on the teaching of Volleyball.

### Table 22 : The results of 5 research hypotheses
To Conclude

The reactions of teachers and pupils to this approach go far beyond the interest level. Positive reactions behold the physical education 'establishment' to seek to incorporate the approach within the syllabus, within teacher training and perhaps within approaches to coaching.
Chapter Eleven

Conclusion and Recommendation

11.1 Reflection on the Study

Enjoyment is certainly an important element for children in a P.E. lesson, but how can P.E. teachers enable children to enjoy the lesson? According to the explanation made by Hellison and Templin (1991)

kids need to get beyond a feeling of survival, to find some success, to get into the flow of the game.

(Hellison and Templin, 1991, p.70)

In other words, children need to get involved in the lesson and gain some success when they take their turns. At least, they feel themselves part of the game and can turn their attention away from the discrepancies in their performance and toward the process and even the product of the game itself.

However, the children in Hong Kong, at present, cannot obtain success from the game, and worse still, they are in a situation in which we can assume their weaknesses are exposed. The main reason being that the P.E. teachers teach the children with the skill-based approach which puts emphasis on technical learning, - hence gaining little success, they know nothing about the game and cannot respond properly in a game situation. Bunker, Thorpe and Almond (1986) suggest the teaching games for understanding approach, (in which children are taught the basic game forms and then game modifications are introduced to teach them the simple tactics and strategies of the game) to overcome the single measure of success being technical proficiency. The rationale behind this approach is based on the link between cognition and action. Techniques are taught when they become essential but success is based on many other factors. In addition, children can also learn at their own pace and ability.
Since this approach has been disseminated in 1982, many P.E. teachers in other countries have adopted and adapted it, as an alternative to, or replacement for, the existing approach in games teaching. However, it seems there has been little impact on P.E. teachers in Hong Kong. For the benefit of the children, the author took the initiative to introduce it to them. In doing so the author hoped to provide a more reflective climate for games teaching and if appropriate, to start the process of introducing it to Hong Kong. Before introducing the new approach, there were many problems ahead to be resolved.

Similar to other countries, the current climate of games teaching in Hong Kong was predicted as leaning towards the skill-based approach which has been adopted since the 1960s. To overcome this problem, four key professionals were identified, namely, the P.E. inspectors at the P.E. Inspectorate and Curriculum Development Institute, the P.E. lecturers at the P.E. teachers training institute, the national governing bodies, and the P.E. teachers at primary and secondary schools. By means of different modes of survey such as questionnaires, comments on the lessons plans, their views on the skill-based approach and the teaching games for understanding approach were obtained. The results, in general, imply that they still lean heavily on the skill-based approach and they are unaware of the teaching games for understanding approach. At the same time, other positive implications were observed. The P.E. teachers reflected that they faced difficulties in teaching the students with the existing approach and also identified its adverse effect on the students. This is an important discovery. Even so the current situation is that the P.E. inspectors and lecturers do not know of alternatives and they still believe that the existing approach can bring success and enjoyment to children and also encourage them to take part actively in the extra-curricular activities throughout their adult life. However, this is not the situation as perceived by the P.E. teachers at school. With a dissatisfaction with the existing approach, they would seem ready to change and to initiate the process. Block (1987) stressed
cultures get changed in a thousand small ways, not by dramatic announcements from the boardroom. If we wait until top management gives leadership to the change we wait to see, we miss the point.

(Block, 1987, P.97)

Even so it is advisable that the P.E. inspectors and lecturers play a role in introducing and disseminating the new approach. The author believes the impact for such a bottom-up process is great although it takes time, and can be facilitated if all levels are receptive.

It is the author’s opinion that the effectiveness and benefits of the teaching games for understanding approach for pupils in games teaching are accepted, however owing to the different teaching culture, adequate evidence must be provided to prove that the new approach is suitable and practical for the P.E. teachers and pupils in Hong Kong. A pilot study, two workshops, a main trial teaching and a second trial teaching were conducted to study the affective aspect of both the teachers and students on the new approach. In addition, a follow-up interview was also designed to study the teachers’ changes one year after the workshop. Their responses will serve as a ‘green’ light or a ‘red’ light for introduction. The findings are very encouraging and supportive.

In general, the results indicated that the teachers had confidence and felt comfortable with the new approach while the students expressed that they obtained more enjoyment from the new approach. Not surprisingly the new approach is welcomed by the P.E. teachers and the students and it is felt appropriate to consider dissemination in Hong Kong. Two intrinsic attributes are worth paying special attention during its introduction. The students indicated that they enjoyed Basketball lessons more when taught by the experienced male P.E. teachers with the new approach. The significant difference between the experienced and inexperienced P.E teachers is their ‘competence’ whereas the difference between the male and the female P.E. teachers is their ‘effort’ put in during their teaching. Inadequate competence and effort of a teacher will give a detrimental effect to the implementation of the new approach, but such would apply equally to more traditional approaches.
In addition, the results of the follow-up interview provide further evidences that the teachers felt comfortable and had changed in terms of the teaching approach and concept of games teaching one year after the implementation. Both the experienced and inexperienced P.E. teachers reflected that to implement the new approach effectively and successfully, they needed more information about the new approach and more support from the headteachers and P.E. inspectors.

11.2 The Strategic Plan for Dissemination

To facilitate dissemination, a strategic plan should be carefully scheduled. As mentioned earlier, the bottom-up process starting firstly with the P.E. teachers and then the P.E. inspectors and lecturers seems to create a greater impact for dissemination. However, this is a rather passive and less effective way. The main reasons are that it is quite difficult to assemble a large number of P.E. teachers to reflect their views of the skill-based approach and this method is also very time consuming. Alternatively, it is wise to disseminate the new approach in a more positive and effective way, i.e. the top-down process. The first dissemination point should start with the P.E. inspectors and lecturers and then spread widely to the P.E. teachers. But the predetermined condition is that the P.E. inspectors and lecturers must fully understand the new approach in advance.

In a relatively confined region like Hong Kong, it would seem possible to do both. Through organizing workshops, seminars and conferences, the P.E. teachers, the inspectors and the lecturers are invited to observe practical sessions and attend sharing sessions with experts. In addition, the P.E. syllabus must also be revised to suit the new approach. The advantage of this method is that these modes of dissemination involve large numbers of P.E. teachers at one time and it takes less time to disseminate it to many teachers.

To provide the P.E. inspectors and lecturers with a full understanding of the new approach in advance, support from the Loughborough team cannot be neglected. It is impossible to understand the new approach by reading several books and articles. An invitation must be sent to the Loughborough team to seek their support and even to
build up a liaison with them. They can be invited to demonstrate practical sessions with the new approach to the P.E. inspectors and lecturers. A further step forward, it is necessary to present the new approach in front of the P.E. teachers in Hong Kong, and also to answer the particular issues raised by the lecturers in situ. Fullan (1993) expressed that

it is not enough to be exposed to new ideas. We have to know where new ideas fit, and we have to become skilled in them, not just like them.

(Fullan, 1993, p.16)

The next step is to ask the P.E. teachers to conduct an action research project to learn from each other (Almond, 1986). Although it is good for dissemination, this step is suggested for consolidation after the P.E. teachers have been thoroughly exposed to teaching games for understanding because it will enable them to seek a better understanding of it. It is this process which will enable teachers to work cooperatively in understanding games and understanding the teaching of games. However it will enable teaching games for understanding to be disseminated further in Hong Kong.

Finally, the last key professionals to be influenced are the national governing bodies. National governing bodies may not accept the educational rationale but they are the key professionals in the dissemination because they have great influence on the P.E. teachers. The most important point is to enable them to understand the value of this new approach for games players and to appreciate that it will lead to more intelligent play and players who understand tactics and strategies and when they need to become more skilful. It is important that they recognise their performance will not suffer if players are practising and learning about the key principles of games. If national governing bodies do not accept the value of the approach, dissemination will be less effective.
Over the 15 years of dissemination, the Loughborough games team have resolved many different problems and a clear direction in the future has also been identified. Their experience provides the author with a blue-print to develop an effective strategic plan for dissemination of teaching games for understanding in Hong Kong.

Since this is the first project conducted in Hong Kong in regard to teaching games for understanding, the author with the support of the Loughborough team is honored and proud to take the initiative to introduce it to Hong Kong. This is actually one of the professional mission as a P.E. lecturer in the Hong Kong P.E. teachers training institute.

11.3 Recommendation For Future Study

In the project, a survey to understand the current climate of games teaching in Hong Kong was conducted. The view of the P.E. inspectors was obtained through the reviewing of the P.E. syllabus. Although such a process is reliable, it cannot provide a wide perspective of their thinking on games teaching. It is recommended that if a survey in the form of questionnaire or interview is conducted directly with them, the results would certainly be more reliable.

A small class size up to 35 pupils in each class was recommended by two P.E. student-teachers to implement the new approach in the pilot study. Their recommendation had been taken into account in the main and second trial teachings. The outcomes from the P.E. teachers’ responses were satisfactory. To maintain the effectiveness of the new approach and the benefit to the pupils, it is recommended that the size should be maintained to the maximum of 35 per class for practising the new approach in the future.

Statistically, the total number of P.E. teachers involved in this project is crucial. Practically, it was very difficult to recruit more P.E. teachers to take part because of time constraint and only 8 P.E. teachers were invited to participate. If the manpower is available, it is recommended to invite a great representation of teachers to implement the new approach. The results will be more reliable.
The findings in this project reflected that both the teachers and pupils felt comfortable and enjoyable in the lessons of Basketball and Volleyball with the new approach. More research work on other sports like Football, Handball, Table Tennis are recommended. Finally a broader form of assessment and evaluation of the teaching games for understanding approach in Hong Kong could be used.

11.4 Conclusion

Following a presentation on this research to the AIESEP congress in Singapore it was fascinating to observe the interest generated by this approach to games teaching. The seminar generated considerable debate and discussion which continued long after the session. This interest started a long train of thought about teaching games for understanding therefore it seemed appropriate to document them in my study.

This research and the discussions in Singapore with other researchers clearly highlighted the need to revisit and re-present a revised synopsis of teaching games for understanding because since its first publication, in the early 1980s different interests and needs have arisen. Teaching games for understanding has sparked off a number of different research avenues but it would seem that the philosophy and rationale of these approaches have not been spelled out in sufficient detail to be able to compare and contrast the starting points for these research projects. Many authors appear to have different interpretations of teaching games for understanding.

Also, the authors in the early days of teaching games for understanding had different reasons for writing papers and outlining their work. Thus, in one sense, the early writings are incomplete. A re-statement of the philosophy and rationale for teaching games for understanding together with a detailed response to the criticisms that have been voiced by a number of authors (in particular Rink, 1996 and Chandler 1996) would be a major contribution to the development of teaching games for understanding. By articulating and mapping out its essential components the original authors would provide a clearer framework for the current research initiatives which have been stimulated by reading the original papers. This would generate considerable
debate and act as a stimulus to a new generation of research projects to enlighten our understanding of games teaching.

It is quite clear that a comparison between a skill-based approach to learning games and teaching games for understanding is likely to dominate some of the research endeavours. This will provide useful data and many teachers would welcome the results of such studies. However, it could be argued that this is only one part of the jigsaw. Some researchers (Griffin et al 1997) have used the teaching games for understanding classification system, which was devised as a tool for selecting games for a school curriculum, in a different way and this has raised issues about other forms of classification and their relevance to tactical appreciation and understanding. In the same way constructivist approaches to learning (Grehaigne and Godbout, 1995) are seen as directly relevant to teaching games for understanding and also concept mapping (Scantling et al, 1992). Associated with both of these approaches is the notion of conceptual teaching (Rink, 1997). All of these developments are directly associated with teaching games for understanding but they could detract thinking away from the original conception and change it beyond recognition. Therefore, it would seem appropriate to make a strong plea to the authors of teaching games for understanding to restate its underlying philosophy, rationale and framework. At the same time they need to be aware of the major theoretical positions that are informing current research into teaching - a point that was strongly made at the Singapore congress - so that they can be linked. Such links may well reinforce teaching games for understanding and make it a stronger model and more attractive to the growing band of researchers interested in re-examining games teaching.
References:


Coventry Teacher, (1986), Coventry Teachers Explore Teaching for Understanding, Coventry: Health Education Authority.


Curriculum Development Committee, (1975). *Provisional Syllabus for P.E. (Form I - VI)*, Hong Kong.


Hong Kong Education Department, (1965). *Education Policy*, Hong Kong Government.


Huntley, G. K., (1959). *Post-Primary Physical Education For Girls*, Thomas Nelson & Sons Ltd.


Physical Education Section, (1964). A Scheme of P.E. for Hong Kong Primary Schools, Education Department, Hong Kong.


Randall, M.W. (1952) Modern Ideas on Physical Education - An Encouragement to Further Reading for Students and Teachers. London: G. Bell and Sons Ltd.


Appendix A

Questionnaire
for the P.E. Lecturers in the Teacher Training Institute
Questionnaire

for the P.E Lecturers Teaching Games
in the Teacher Training College

1. Do you work closely to the Inspectorate Syllabus for teaching games with skill in having a major class forms?

   Warm Up ➔ Skill ➔ Game ➔ Cool Down

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

2. Are there any other approaches that you use a little?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
3. Do you teach with transfer between games?

(Transfer of skills but not the principles, or the understanding of the games etc.)

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

4. Which games do you teach your students in training? Why?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Thank you for your kind assistance.
Appendix B

The Comment of
Two National Governing Bodies
(The Basketball Association & the Volleyball Association)
COMMENTS FOR TEACHING PLANS OF COGNITIVE APPROACH

Session 1: (I) Introductory Activities
1. Warm up be emphasized on footwork.
2. Running along the court—introducing court sense, e.g. figure of 8 pattern.
3. More ball sense can be introduced here instead of boring stretching exercises.

(II) Individual/Partner's Work
- More options can be given.
- Too close to the basket (under the basket) i.e. bad angle for shooting.

T's Question: What shall we do if we want to shoot the basket in a longer distance?

Comments: What shall we do if we want to make a high percentage shot from a long distance?
- Identify distance (at least from 3-point line)

(III) Competitions
- 1/2 court 3-on-3 can be a first priority or an variation.

Session 2: (I) Footwork Revision

(II) The player cannot run or walk more than one step when they holding the ball.
- Don't develop the habit of dribbling once before passing or shooting. (3-5 times dribbles to allow more practice chance.)

(III) We can set up rules that a pass before a basket is made, 5 points can be given.

Session 4: "Offence" instead of "Attack"
- "Offensive players" instead of "Attackers"
- Defensive Style: guarding receiving
  Ball-Def. - Off.
- guarding shooting:
  Off. - Ball-Def

Session 5: "2 on 2" instead of "2 attackers and 2 defenders"

Commented by: Raymond Leung
Couches Coordinator & Coach of HK Junior Squad
Hong Kong Basketball Association

Ref: WP\Ballgame94\Busteach

Mr. Liu Yuk Kwong.
Grantham College of Education.
42 Gascoigne Road.
Yaumati, Kowloon.

Dear Mr. Liu,

Comment on Teaching Approach of Games

With reference to your recent request for comment on teaching approach of volleyball games, I would like to give some advice and opinions in personal.

It is a great idea to shift from a technique-based approach to a cognitive approach and I am sure that children will find the game more interesting and enjoyable. They will be motivated and encouraged to make decisions as they are required in game situation.

The practicability to introduce the cognitive approach is highly dependent on the ability of mastering communication skills, class control and knowledge in volleyball of that PE teacher.

Children must have a certain level basic skills before they are motivated to explore tactics in offensive or defensive formation. As you present in session 5, perfect combination of first reception, setting and spiking is essential in attack. Here I would like to state that although you have raised an excellent problem so that children are eager to think and work for solving it, children still need a period of time to grasp a minimum level of basic skills before going further. As I conclude both cognitive approach and technique-based approach are not mutually exclusive. Cognitive approach facilitates the awareness of the contextual nature of the game while technique-based approach back up the enjoyment and satisfaction in playing of the game by means of perfect skills performance.

I suggest your 6 sessions of teaching plan to PE student teachers should not less than 16 contact hours (for you did mention how long for a session).

For your reference, I enclose with a scheme of work of elementary coaching course of our Association. Thank you for your letter to HKVBA. Wish you great success in your study.

Yours sincerely,

AU YEUNG CHUN LEUNG
(Panel Chairman of Coaching Committee of HKVBA)
(FIVB Coach, Level 2)
Appendix C

Questionnaire
for P.E. Teachers in Secondary Schools
Survey on Games Teaching in Hong Kong

1. Do you still use the Approach you were taught at College for games teaching, i.e. Warm Up, Skills practice, Game and Cool down?

   Yes ___   No ___

2. Are you aware of any other approach/es to teaching of games, e.g. teaching games for understanding; inner game, etc.?

   Yes ___   No ___

   If yes, please state
   
   
   

3. Have you changed the way you teach games since leaving College?

   Yes ___   No ___

   If yes, please state
   
   
   

4. Do or did you have any difficulties in using the skill-based approach to teach ball games?

   Yes ___   No ___

   If yes, please state
   
   
   

5. Have you any other comments about games teaching?

Yes ___  No ___

If yes, please state ________________________________

_______________________________

_______________________________

Finally would you like

6. a. to know more about a different approach to teaching games like teaching games for understanding in which the game and the tactics of the games are central in the lesson?

Yes ___  No ___

b. to know the results of this questionnaire?

Yes ___  No ___

If `yes' to either questions, please complete the address label below.

Name : ________________________________

Address : ________________________________

Telephone : ________________________________

Thank you for your kind assistance and spending time in completing this questionnaire.
Appendix D

Questionnaire
for the P.E. Teachers after the Workshop
Questionnaire

for the Secondary School P.E. Teachers after the Workshop

(Thank you for taking out in the experiment which is an attempt to improve games teaching but this can only happen if you will be honest.)

1. What was your feeling about this cognitive approach immediately after the workshop?

   a. logic / rationale.

   b. gut feeling on your reaction.

2. Did you enjoy the workshop? If so. How? Any way it could be better?
3. Having taught using the cognitive approach, did the workshop prepare you to teach comfortably with this approach?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. How confident are you about continuing with this form of teaching?
   a. in this game.
   b. in other games (principle of games, understanding of the games, etc.)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5. Open feedback.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your kind assistance.
Appendix E

Suggested Lesson Plan: The Modified Cognitive Approach and the Traditional Approach for Volleyball
Modified Cognitive Approach

Suggested Lesson Plans for Volleyball Teaching

Objectives of the SIX Lessons

1. To introduce the students to appreciate the game of Volleyball.
2. To enable the students to understand how to play the game of Volleyball.
3. To teach the students to create space in attack.
4. To enable the students to demonstrate how to deny the space in defence.
5. To allow the students to understand the tactics in attack.
6. To teach the students to display the tactics in defence.
Lesson 1: To introduce the students to appreciate the game of Volleyball.

Equipment:

The Ball: The balls which are in normal size are used but they must be inflated softer.

The Net: The height of the net is lower to 7 feet (2.2m). Owing to the special situation in Hong Kong, the Volleyball session must be taught in an multi-purposes outdoor area and it is definitely time consuming to install 3 nets and the size of the playing area is also limited (Basketball size open area). Therefore a long rope, hanging with colour bands, would be adopted.

The Court: The basketball size court would be divided into 3 equal halves to accommodate a class of about 35-40 students. Therefore 12 students would be assigned to each half which will become long and thin. A rope net is set in between each area.

(I) Introductory Activities

1. Jogging freely.
2. Running along Volleyball court and introduce the side line and end line.
3. Arm stretching.

(II) Individual / Partner’s Work

Teacher: Let us play the game of Volleyball by starting with 2 Vs 2 throwing the ball over the net in a long and thin area. If one side cannot receive and throw back the ball before bouncing the ground, that side will loose a point.

Teacher: Now, we can put both hands tightly together and use the forearm to hit the ball instead of throwing it back to the opposite side. (If the students cannot perform well, they are allowed to let the ball bounce once on the ground and then hit it back. The students, then, start playing the game by throwing the ball to the opposite side and hit it back until one side cannot return the ball.)

At this stage, the teacher should introduce the necessary rules, like

a. the rule of 'Three Contacts'.

b. the rules of 'Formation'. 6 Vs 6 position in the court as below:

\[
\begin{array}{ccc}
4 & 3 & 2 \\
5 & 6 & 1 \\
\end{array}
\]

c. the rule of 'Rotation of players'. 6 Vs 6 position in the court as below:

\[
\begin{array}{ccc}
4 & 3 & 2 \\
5 & 6 & 1 \\
\end{array}
\]
No. 1 starts the game by throwing the ball to the opposite side. If he wins, he continues to throw the ball. If not, the game will be started by the opposite side.

Teacher: We all know how to play the game and now let us serve the ball instead throwing the ball to the opposite side. (The teacher demonstrates how to perform underhand serve. The teacher should remember that teaching of serving techniques only if necessary).

Students: We can't hit the ball to the appropriate place and sometimes the ball runs very high.

Teacher: Let us overcome these two problems. Can you tell me why before we tackle these problems. Think of the standing and hand positions.

Students: We always stand apart and face forward. After serving, our hands bend and point upward.

Teacher: Right. whenever we serve, we must move our shoulder and leg to point at the intended serving place. Bending the hand after serving will hit the ball very high and therefore try not to bend the hands. We can bend slightly only. Let us practise again.

At this stage, the teacher should remember not to stick in teaching of serving techniques.

(III) Competitions

The students play the game with 6 Vs 6. Both sides should stand in position, serve the ball and rotate in formation.

(IV) Concluding Activities

1. Stretching exercise
2. packing up of equipment
Lesson 2: To enable the students to understand how to play the game of Volleyball.

(I) Introductory Activities

1. Running along the Volleyball court and check the students' understanding of the end and side lines.
2. Arm stretching.
3. Waist bending.

(II) Individual / Partner's Work

Revision of playing the game.

Teacher: Let us play the game by serving in the service area. (The teacher introduces the serving area). We must serve the ball to the opposite side within the court and if the ball is out of the court, we shall loose one a chance to score a point.

Students: It is quite difficult to serve the ball to the opposite side.

Teacher: What shall we do?

Students: We can hit the ball hardly by swinging our hand backward.

Teacher: Let us practise it and remember just bend the hands slightly.

Students: Sir, we sometime serve and the ball touches the net. Which side wins or looses?

At this stage, the teacher should introduce 'Net serve' and explain the differences of scoring between 'Net serve' and the ball touching the net after serving.

Students: Sir, we can't return the ball back to the opposite side when we receive the serve. The ball is always out of control.

Teacher: You should move quickly towards the ball and hit it slightly to your partner. Then let your partner return it back.

Students: We sometimes touch the net or step over the centre line after we return back the ball to the opposite side. Do we allow to do so?

Teacher: No, you are not allow to do it and you will loose the chance to score. (The teacher should introduce the rules of 'Net touching' and 'Stepping over centre line') Apart from the above rules, the scoring system of the game should also be introduced.
(III) **Competition**

The students play the full game with 6 Vs 6.

(IV) **Concluding Activities**

1. Stretching exercise
2. Packing up of equipment
Lesson 3: To teach the students to create space in attack.

(I) Introductory Activities

1. Slow jogging.
2. Jogging with sudden change of directions.
3. Arm stretching.
4. Digging pass.

(II) Individual / Partner's Work

6 Vs 6 play the game.

Teacher: If we want to win one point easily, what shall we do?

Students: We can serve the ball to their back court so that they can't return the ball easily.

Teacher: Correct. Try to practise it.

Students: We can make it but after several times of practice, they can return the ball easily. Therefore it becomes harder to gain one point again.

Teacher: What shall we do? Think of the space they can't return easily after hitting the ball back.

Students: We can serve the ball alternatively to the left or right hand side of the back court.

Teacher: Correct. Let us practise it. Try to serve the ball to various space where the opponents cannot return the ball easily.

Students: Like serving, can we also dig the ball to their back court in various direction in order to win a point?

Teacher: Yes, of course. Try to practise it.

At this stage, the game will be more challenging and the teacher should check their understanding of scoring system and the rules of the game.

Teacher: Where is other space that we can dig to in order to gain one point without difficulties?

Students: It should be the centre of the opponent's court and if they move to the centre, the sides of the court will become the best space to attack.

Teacher: Right. Let us try it.
(III) **Competition**

The students play the full game with 6 Vs 6.

(IV) **Concluding Activities**

1. Stretching exercises.
2. Packing up of equipment.
Lesson 4: To enable the students to demonstrate how to deny the space in defence.

(I) **Introductory Activities**

1. Free slow jogging and side stepping.
2. Free jogging with sudden change of directions.
3. Arm stretching.

(II) **Individual / Partner’s Work**

6 Vs 6 play the game.

Teacher: How did we feel as defenders during last session?

Students: It was quite difficult to return the ball and we always lost points.

Teacher: How can we deny the space particularly the back and the centre during defence?

Students: We can move quickly to the back.

Teacher: How to do it?

Students: After returning the ball from the front or middle courts, we shall move back to our won positions quickly.

Teacher: Great. Let us practise it and see how does it work.

Students: When we move back at once, the opponents may serve or dig the ball to the front court and we shall loose again. What shall we do.

Teacher: How can we make them more difficult to return the ball to the front or middle court again?

Students: We can dig the ball to either the left or right of attackers’ far back court so that they can’t return the ball to our front court easily.

Teacher: Good. Create difficulties to the attackers. Let us do it.

Students: Sir, we sometimes make mistakes that we don’t know whose turn to hit the ball. Therefore we loose a chance to score easily?

Teacher: You should think of the co-operation with your partners on how to deny space.
Students: Yes, when the front court players dig the ball, the back court player should move forward immediately to deny the space.

The teacher should briefly point out the responsible areas of each player.

(III) Competition

The students play the full game with 6 Vs 6.

(IV) Concluding Activities

1. Stretching exercise.
2. Packing up of equipment.
Lesson 5: To allow the students to understand the tactics in attack.

(I) Introductory Activities

1. Free jogging and jumping.
2. Arm stretching.
3. Squat jump.
4. Hitting the ball on ground.

(II) Individual / Partner's Work

6 Vs 6 play the game.

Teacher: Except serving and digging the ball to space where the opponents cannot return the ball to gain one point, is there any other way to create difficulties to the opponents?

Students: We can hit the ball hardly on opponents' side.

Teacher: Great. See how does it work. Where is the best area to hit the ball? (The introduction of attack zone and line and the role of players e.g. spiker and setter).

Students: Hit the ball either to the front or far end of the court.

Teacher: The teacher demonstrates and teaches the correct performance of spiking but it should be remembered not to stick in teaching of spiking techniques.

Students: Sir, we cannot spike the ball to the intended area that we want to attack.

Teacher: Why? What's wrong?

Students: The setters cannot dig up well near the net.

Setters: It is quite difficult to dig up to the appropriate area to the spiker. This may be due to the first receiver who cannot perform a good pass to us.

Teacher: That means the first receiver should pass a good ball to the setter and then the setter sets the ball to an appropriate place at an appropriate height for the spiker to smash the ball. Let us practise and see how does it work.

The students understand how to receive the serving ball sensibly and then pass it to the setter. The setter will dig up the ball for spiking to either the far end or the front court.

Students: Sir, we can make it. There is another problem. Although we spike the ball to the far end, the opponents sometimes can dig it up and return the ball.
Teacher: What shall we do? Be careful! Where is the best place to hit to when the opponents move backward?

Students: The centre.

Teacher: Right. We can tip the ball to the centre of the court when the opponents stand at the back of the court. Let us practise how to tip the ball.

At this stage, the students understand when to spike the ball to the back or front courts and also tip it to the centre.

(III) Competition

The students play the full game with 6 Vs 6.

(IV) Concluding Activities

1. Stretching exercise.
2. Packing up of equipment.
Lesson 6: To teach the students to display the tactics in defence.

(I) Introductory Activities

1. Free jogging forward and backward.
2. Side-stepping to the right and left.
3. Digging practice

(II) Individual / Partner's Work

Teacher: Last session, we had learnt the tactics to attack and now let us practise how to defend. When the attackers spike or tip the ball, What shall we do as defenders? Can we stop their attack?

Students: Of course, we can. We can move quickly to dig up the ball or block their attack.

Teacher: How to block them and where is the best place to block?

Students: We can jump up near the net.

Teacher: Let me demonstrate how and where to block the spiking. During blocking, it is a foul when touching the net.

The teacher should remind the students that it is not allow to touch the net while blocking.

Students: It seems better now but whenever they spike, they always spike to the far end and we don't know whose responsibility to dig up the ball.

Teacher: Where will the ball be likely hit to when the blocking is in position 4?

Students: The ball might be hit in a straight or diagonal directions.

Teacher: Correct, the near-by player should be positioned in these areas.

Students: It works but we sometimes loose when the attackers tip the ball. What shall we do? Is there any method to overcome it.

Teacher: Of course, we have. Think of the co-ordination of other players.

Students: The other players can follow up to cover that area where the ball is likely to be tipped to.

Teacher: Let us try it and be sure that when the front player moves up to block the ball, the back player should take action to follow up.
At this stage, the students will understand when to dig up a straight or diagonal spike, when to perform follow up in defence.

(III) Competitions

The students play the full game with 6 Vs 6 and emphasis will be put on how to defend during the attack.

(IV) Concluding Activities

1. Stretching Exercise
2. Packing up of equipment
Skill-based Approach

Suggested Lesson Plans for Volleyball Teaching

Objective of the SIX Lessons

1. To introduce the students to perform the digging skill of Volleyball.
2. To enable the students to acquire the digging skill of Volleyball in the game.
3. To teach the students to learn overhead pass.
4. To enable the students to demonstrate underhand serve.
5. To allow the students to display the skill of underhand serve in Volleyball.
6. To assist the students to understand the rules of the game.
Lesson 1: To introduce the students to perform the digging skill of Volleyball.

(I) Introductory Activities

1. Free jogging and side stepping
2. Jogging along the Volleyball court
3. Stretching exercise

(II) Skill Practice

1. Free passing and catching of Volleyball.
   (The ball should be high.)
2. Introduction of the correct hands position during digging.
   (Two hands are closed & kept together; contact with the ball is with the forearms which are turned facing upwards; don't swing the arms.)
3. Correct standing position during digging
   (Bend the knees before receiving the ball but straighten them when receiving the ball.)
4. Practise digging pass with the partner.
   (One throws and one digs in short distance.)
5. Practise digging in longer distance.
6. Start throwing the ball to the right and left to get the partner used to positioning correctly.
7. Digging continuously with partner.

(III) Competitions

The students play the game of digging with 5 Vs 5 over a net.

(IV) Concluding Activities

The students perform
1. Deep breathing.
2. Stretching exercise.
3. Packing up of equipment.
Lesson 2: To enable the students to acquire the digging skill of Volleyball in the game.

(I) Introductory Activities

1. Free jogging forward and backward
2. Arm stretching and leg pressing
3. Free digging revision

(II) Skill Practice

1. One throws and the other one digs up the ball in an appropriate distance.
2. Practise digging the ball from the left.
3. Practise digging the ball from the right.
4. Running a few steps forward and digging up the ball.
5. Running a few steps backward and digging up the ball.
6. Practising either running a few steps forward or backward to dig up the ball.
7. Free practising of digging up the ball to the partner from any directions.
8. 4-men relay digging up the ball.

(III) Competitions

The students play digging up the ball with 4 Vs 4 and 3 contacts is introduced.

(IV) Concluding Activities

The students perform
1. Deep Breathing
2. Stretching exercise
3. Packing up of equipment
Lesson 3: To teach the students to learn overhead pass.

(I) Introductory Activities

1. Free jogging
2. Wrists and fingers twisting
3. Arm swinging
4. Leg pressing

(II) Skill Practice

1. Revision of underhand digging (2 in a group).
2. Free practice of underhand digging (2 in a group).
3. Introduction of correct hand position of overhead pass. Stand apart & bend the legs slightly).
4. One throws the ball and one catches the ball with overhead pass hand position.
5. One throws the ball and one catches and then pushes the ball to the air. (Both legs and hands become straight after pushing the ball).
6. One throws the ball and one performs overhead pass (The returned ball should be high and be received by the thrower successfully).
7. Practise overhead pass continuously.

(III) Competitions

The students play the game with 4 Vs 4 and emphasis will be put on overhead and underhand passes.

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 4: To enable the students to demonstrate underhand serve.

(I) **Introductory Activities**

1. Free jogging
2. Arm swinging
3. Free digging

(II) **Skill Practice**

1. Hitting the ball on ground with one hand.
   (Keep the hand closed.)

2. Hitting continuously the ball upward in 2 metres high with one hand.
   (Hit the ball at waist height.)
   (Follow through.)

3. One hand throws up the ball and the other hand hits the ball to the partner.
   (Keep the feet apart for good balance.)

4. Correct arm swing position practice

5. One hand throws the ball and the other hand swings forward from backward to hit the ball to the partner in a longer distance.

6. Practise in a longer distance.

7. Practise with the net.

(III) **Competitions**

4 Vs 4 play the game with underhand serve and digging up the ball. Emphasis will be put on underhand serve correctly.

(IV) **Concluding Activities**

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 5: To allow the students to display the skill of underhand serve in Volleyball game.

(I) **Introductory Activities**

1. Running forward and backward
2. Stretching exercise of arm, waist and leg.
3. Free digging pass

(II) **Skill Practice**

1. Revision of underhand serve.
2. Aiming at the partner and Serving the ball to him. (Shoulder should be pointed to the partner).
3. Serving to the partner in a longer distance.
4. Serving over a net.
5. Serving over the net from the Service area.
6. Serving the ball in a straight direction to the opposite court.
7. Serving the ball in a diagonal direction to the opposite court.
8. Serving to the opposite back court.
9. Serving to the opposite front court.

(III) **Competitions**

The students play the game with 4 Vs 4 and serving from the service area and 3 contact pass are allowed.

(IV) **Concluding Activities**

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 6: To assist the students to understand the rules of the game.

(I) **Introductory Activities**

1. Free jogging forward and backward
2. Fingers and wrist twisting
3. Arm swinging
4. Leg pressing

(II) **Skill Practice**

1. Free underhand digging and overhead passing.
2. Revision of underhand serving.
3. Introduction of basic rules and regulations of Volleyball.
   a. the court
   b. scoring system
   c. rotation formation

(III) **Competitions**

The students play the game with 6 Vs 6 and are allowed to perform digging and overhead passes, and underhand serving in the game.

(IV) **Concluding Activities**

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Appendix F

Suggested Lesson Plan: The Modified Cognitive Approach and the Traditional Approach for Basketball
Cognitive Approach

Suggested Lesson Plans for Basketball Teaching

Objective of the SIX Lessons

1. To enable the students to appreciate the game of Basketball.

2. To introduce the students how to play the game.

3. To teach the students to understand how space is created in attack.

4. To teach the students to understand how space is denied in defence.

5. To enable the students to demonstrate the tactics of attack.

6. To enable the students to demonstrate the tactics of defence.
Lesson 1: To enable the students to appreciate the game of Basketball.

Equipment:

The ball: The students were about 12 years old and it was suggested to use the modified basketball which was comparatively smaller in size.

The Basket: Because there were only two standard baskets installed in a basketball court, it was impossible to accommodate 40 students to play. Therefore 8 self-made baskets were prepared and stationed in the basketball court as indicated below:

```
<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 5</td>
<td>Group 6</td>
<td>Group 7</td>
<td>Group 8</td>
</tr>
</tbody>
</table>
```

They were made by a rattan hoop and high jump stand. Of course, the hoop was bigger and the height of the basket was lower when compared with the standard one.

The Court: Normally, there was one basketball court in each secondary school. In order to accommodate 40 students to play the game, it was recommended to divide the court into 8 equal halves which were drawn as above.

(I) Introductory Activities

1. Free running forward and backward
2. Running along the Basketball court and introducing the names of side lines and base lines
3. Ball passing freely

(II) Individual / Partner's Work

Teacher: Basketball is a fast moving, all action game. The game is very simple and is to get the ball into the opposing basket in order to score points. Now let us practise it. (The teacher divide the 40 students into 4 groups and 5 of them will play against 5 in each group. Colour bands will be used to differentiate each other.)

Student: It is a long way from the opposite basket and the opponents will stop us to shoot it. How can we shoot the ball into the opposite basket?

Teacher: In order to avoid their stopping, you can pass the ball to your partners. Then you can get closed to the opposite basket.
The teacher should introduced the 'No travel' rule.

Student : We can get closer to the basket and make a shot but it still seems rather difficult because the defenders actively stop our passing. What shall we do?

Teacher : You should move to the space where there is no defenders.

Student : It is easy now but when we shoot the basket, the ball always hits on the hoop.

Teacher : Do you know why?

Student : The ball may not be higher enough.

At this stage, the teacher should understand that he is not teaching the techniques of shooting.

Teacher : Correct. Let us pass and shoot the ball into the opposite basket.

(III) Competitions
The teacher introduces the students
1. to start the game by jumping the ball and restart the game after scoring.
2. When the ball goes out of bounds it shall be thrown into the field.
3. 5 Vs 5 plays the game.

(IV) Concluding Activities
1. stretching exercise
2. packing up of equipment
Lesson 2: To introduce the students how to play the game.

(I) Introductory Activities

1. Running along the side and base lines.
2. Running and introducing the names of centre and free throw lines.
3. Passing and receiving the ball.
4. Shooting the basketball.

(II) Individual/Partner's Work

Teacher: Let us revise what we have learnt in the last session. Practise passing to the partner and then shooting the basket.

Teacher: Except passing, is there any other method to shoot the basket easily when we stand far away from the basket and block by the defenders?

Students: We can take the ball and run near to the basket.

Teacher: We can't take the ball either run or walk because of the 'No Travelling Rule.' Think of the other possibility.

Students: We can dribble the ball and walk near to the basket.

Teacher: Correct. Let us dribble the ball and walk towards the basket and shoot. (The teacher introduces the rule of 'Double dribbling').

Student: We can't dribble the ball effectively because the defenders always seize the ball. When can we use dribbling?

Teacher: You can dribble the ball when the defender is far away from you and if you want to create space for your partners.

At this stage, the teacher should check their understanding on the decision when to dribble and pass the ball to their partners.

Teacher: Now let us add up all we have learnt and practised, i.e. dribble the ball sensibly and pass it to the partner and shoot.

Students: Can we practise in another way, i.e. pass the ball first, dribble it and finally shoot it?

Teacher: Of course we can. Let us do it in this way.

The teacher should encourage them to observe the rules of the game.
(III) Competitions

The teacher introduces the students that
1. they cannot run with the ball
2. No shouldering, holding, pushing and striking are allowed.
3. 5 Vs 5 play the game and encouragement is given to score as many as possible.

(IV) Concluding Activities

1. Stretching exercise
2. Packing up of equipment
Lesson 3: To teach the students to understand how space is created in attack.

(I) Introductory Activities

1. Free running and stopping.
2. Running along the basketball court with various speed.
3. Free dribbling and passing

(II) Individual / Partner's Work

Teacher: Was it easy to score during last competitions?

Students: No, it is because the defenders always intercept or steal the ball.

Teacher: How to avoid it?

Students: The partner can run away from the defenders when receiving the ball.

Teacher: How to do it?

Students: When they are in the left, we can, of course, run to the right.

Teacher: Correct. Let us practise it in this way.

At this stage, the teacher should encourage the students to dribble and pass sensibly.

Teacher: Except running either to the right or left, is there any directions we can run?

Students: Yes, we can run to the front or to the back of the court.

Teacher: Right. Let us do it and see whether it is easier to shoot or not.

(III) Competitions

The teacher introduces the student
1. the five-second rule
2. 5 Vs 5 play the game and encourage the attackers to run away from the defenders to create space.

(IV) Concluding Activities

1. Stretching exercise
2. Packing up of equipment
Lesson 4: To teach the students to understand how space is denied in defence.

(I) Introductory Activities

1. Running forward and backward
2. Running with sudden stop
3. Passing and dribbling

(II) Individual/Partner's Work

Teacher: Last session, we had learnt how to create space in attack. Today, we continue how space is denied in defence. Can the defenders easily stop the attackers to score?

Students: No. The attacker run very fast either to the sideways or back to receive the ball and then score the basket.

Teacher: How do we stop the attack?

Students: We can react quickly and run close to them.

Teacher: Let us practise it.

Students: Sir, the attackers, sometimes, run very fast and always change to an unpredictable direction. Therefore we can't follow and guard them.

Teacher: What can we do? Which is the effective way to stop them?

Students: We can run in front of them, i.e., in a position between the attacker and the basket to guard the ball.

Teacher: Correct. We should always get back to our basket before the attacker starts to attack, and we position ourselves in between the attackers and the basket. Let us practise in this way.

(III) Competitions

The teacher introduces the students
1. the three-seconds rule
2. 5 Vs 5 play the game.

(IV) Concluding Activities

1. Stretching exercise
2. Packing up of equipment
Lesson 5: To enable the students to demonstrate the tactics of attack.

(I) Introductory Activities

1. Free running
2. Running with sudden change of speed and directions
3. Shooting and passing
4. Dribbling with various speed

(II) Individual / Partner’s Work

Teacher: Let us play a game with 2 attackers and 2 defenders and see how difficulty it is to attack.

Teacher: Is it easy to attack with 2 defenders?

Students: No. Although we create space, the defenders know how to deny it.

Teacher: What should we do if we want to attack more easily and successfully?

Students: If we have 3 attackers, we should score more easier.

Teacher: Good, but we don't want to play a game with 3 attackers. What should we do?

Students: We can play with 2 attackers Versus 1 defender.

Teacher: Good. Let us try and see how does it work.

Teacher: Is it better to attack now?

Students: Yes, of course. We win the game.

Teacher: During the game, say 5 Vs 5, how can we create the situation of 2 Vs 1?

Students: When the opponents cannot return to their own court after attack.

Teacher: Good. How can we make use of the chance?

Students: After the opponent's shooting, we can catch the re-bounced ball and then pass it at once to our attackers.

Teacher: Let us practise it.
(III) **Competitions**

The teacher introduces the students
1. the free throw
2. 5 Vs 5 play the game

(IV) **Concluding Activities**

1. Stretching exercise
2. Packing up of equipment
Lesson 6: To enable the students to demonstrate tactics of defence.

(I) Introductory Activities

1. Running forward and backward
2. Running with sudden change of speed and directions
3. Arm stretching and swinging

(II) Individual/Partner’s Work

Teacher: Last session, we had taught about how to attack in the situation of 2 Vs 1. How do the defenders feel?

Students: Although we position ourselves in between the opponents and basket, it is still difficult to stop their attack. They always throw the ball higher and pass it to their members.

Teacher: Right. How can we stop their high passing?

Students: We can make use of our hands and give pressure to them during their pass.

Teacher: Right. When we stand in front of the defender, we must make full use of our hands to challenge them. Let us try it.

Students: Sir, it is better now but when they shoot, we jump to challenge their shooting. At this moment, they suddenly change their mind and don’t shoot. Then they dribble the ball and score it.

Teacher: Do you think it is necessary to jump during defence?

Students: No, Sir.

Teacher: Right, try not to jump unless our anticipation is correct. Now go and practise it.

Students: Sir, it is still in an disadvantageous situation because there are two attackers and we have only one defender.

Teacher: Right, how can we alter this disadvantageous situation?

Students: We can ask our team members to help us. They can return to our court quickly.

Teacher: Correct. Our purpose in such a situation is to delay their attack and give us ample of time for our team members to return to defend the attackers. How can we do it?
Students: We can react quickly and force the attackers to make error of passing or shooting.

Teacher: Let us do it in our competition.

(III) Competitions

The students play the full game with 5 Vs 5 and emphasis should be put on defence.

(IV) Concluding Activities

1. Stretching exercise
2. Packing up of equipment
Skill-based Approach

Suggested Lesson Plans for Basketball Teaching

Objectives of the SIX Lessons

1. To enable the students to learn chest passing.

2. To introduce the students how to practise and demonstrate chest bounce pass in the game.

3. To teach the students to dribble the ball with various speed.

4. To introduce the students how to practise shooting the basket.

5. To enable the students to demonstrate the offence skills in basketball.

6. To allow the students to perform the skills of defence.
Lesson 1: To enable the students to learn chest passing.

(I) Introductory Activities

1. Jogging around the court
2. Arm stretching
3. Waist twisting
4. Leg pressing and bending

(II) Skill Practice

1. Free passing
   (Free spacing, with short distance & ensure the receiver to receive the ball)
2. Pass the ball with both hands stretching out
3. Pass the ball with both hands stretching out from the chest.
4. Increase the distance from 3 metres to 4 metres to perform chest passing and catching.
5. Pass the ball to the right and the receiver moves quickly to the right to receive the ball.
6. Pass the ball to the left and the receiver moves to the left rapidly to the left to catch the ball.
7. Pass either to the right or left and the receiver should catch the ball successfully.

(III) Competitions

The whole class is divided into 6 groups. Each group will be in a circle formation and have one ball. The students are allowed to perform chest pass as many times as possible within the group in 3 minutes. The highest score within that time will win the game.

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 2: To introduce the students how to practise and demonstrate chest bounce pass in the game.

(I) Introductory Activities

1. Free running forward and backward.
2. Side stepping.
3. Waist twisting and bending.
4. Free passing.

(II) Skill Practice

1. Revision of chest pass in short distance.
   (Chest-high position; keep the elbows in; thrust the arm outward; with a follow through.)
   (The receiver: extending the hand)

2. Chest bounce pass in short distance. The ball is passed to the floor and a single bounce takes it into partner's hands.
   (Chest-high position; pass the ball in 2/3 floor distance between the passer and receiver; keep the eyes on the target and follow through.)

3. One step forward to perform chest bounce pass and one step backward to receive the ball.
   (With appropriate distance; stand apart with one leg forward and the other backward)

   (The distance should be appropriate)

5. Chest bounce pass to the right and the receiver moves to the right to receive the ball.
   (Receiver should use side step to move quickly)

6. Practise to pass the ball to the left.
   (Ensure the receiver to catch the ball)

7. Practise either to the right or left.

8. Free running and practise chest bounce pass.

(III) Competitions

The students play the game with 2 Vs 2 and are allowed to pass the ball with either chest pass or chest bounce pass.
(IV) **Concluding Activities**

The students perform
1. deep breathing
2. Stretching exercise
3. packing up of equipment
Lesson 3: To teach the students to dribble the ball with various speed.

(I) Introductory Activities

1. Free running forward and backward
2. Running with change of directions and speed
3. Revision of chest pass and chest bounce pass

(II) Skill Practice

1. Free dribbling
   (Standing still with one leg forward and the other backward)
2. Dribbling with the fingers and pad of the hand.
   (Pushed the ball down firmly; bend the knee)
3. Dribbling near the body.
   (Bounce in waist height; bounce the ball in between 2 legs; the eyes not on ball but
   look forward)
4. Use the other hand to dribble the ball.
5. Dribble the ball with alternate hand.
6. Move around and dribble the ball
7. Dribble the ball at a low level
8. Dribble the ball at a higher level
9. Dribbling and running

(III) Competitions

The students perform dribbling competition.
(The class is divided into 8 groups and each member in the group should dribble the
ball to the target point and then return back. Pass the ball to his group member who
will take turn. The fastest group to complete dribbling will win the competition).

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 4: To introduce the students how to practise shooting the basket.

(I) Introductory Activities

1. Free passing
2. Free dribbling
3. Dribbling along the court

(II) Skill Practice

1. Pass the ball with two hands.
   (The ball should be higher & bend the legs)
2. Pass the ball starting from head position.
   (The ball should be high with a curve)
3. Pass the ball with the shooting hand.
   (Ensure the receiver to catch the ball without moving.)
4. Shoot the ball to the basket.
   (Feet should point in the direction of the shot; shoulder should be facing squarely to
    the basket; eyes should be fixed firmly on the target and follow through.)
5. Shoot the ball to the farther end of the hoop.
6. Shoot the ball to the near end of the hoop.
7. Shoot the ball to the basket.
   (The ball should be above the hoop)
8. Increase the distance and shoot the ball into the basketball.

(III) Competitions

The students play the game with 2 Vs 2 and emphasis would be put on shooting.

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment.
Lesson 5: To enable the students to demonstrate the offence skills in basketball.

(I) Introductory Activities

1. Free running with sudden change of direction.
2. Free running with sudden change of speed.
3. Free passing.
4. Dribbling freely.

(II) Skill Practice

1. Dribbling with sudden change from right to left.
2. Dribbling with sudden change from left to right.
3. Dribbling against the opponent with sudden change of directions.
   (No active offence from an opponent).
4. Dribbling and feinting with an offender who has active response.
5. Dribbling and feinting to the right against the opponent and then shooting.
6. Dribbling and feinting to the left against the opponent and then shooting.
7. Dribbling and feinting in any directions against the opponent and then shooting.

(III) Competitions

The students play the game with 2 Vs 2 and emphasis will be put on how to attack the opponents.

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Lesson 6: To allow the students to perform the skills of defence.

(I) Introductory Activities

1. Free running
2. Jogging backward
3. Jogging backward with sudden change of directions
4. Arm stretching

(II) Skill Practice

1. Two in a group. One dribbles the ball facing the defender who moves backward.
2. Correct position of guarding.
   (Stand apart, one arm upward and the other in sideways position).
3. Attacker moves with sudden change of directions and defender follows to guard him
   without pressurising the attacker.
4. Defender guards and puts pressure on the attacker.
5. Defender actively steals the attacker's ball.

(III) Competitions

The students play the game
1. with 2 Vs 2.
2. with 5 Vs 5 and introduce the rules and regulations.

(IV) Concluding Activities

The students perform
1. deep breathing
2. stretching exercise
3. packing up of equipment
Appendix G

Suggested Lesson Plan: The Cognitive Approach for Volleyball
Cognitive Approach

Lesson Plans for Volleyball Teaching

Teaching Steps:

Warm Up ---> Games Development ---> Cool Down.

1. 1 V 1 ---> Two hand throw and catch, (throw from where you catch)
   Q: How to win a point? ---> play
   A: Ball touches the ground.

2. Where do you aim for? ---> play
   A: Away from person.
   Q: Where ---> front or back. (in a long thin court)

3. Which is safest to send ball to ---> play and see
   A: To the back unless it is a real winner/ or they have to throw from very low.
   Q: Why?
   A: Near the net they can attack you quickly unless ball is very low (2 principles of court games defence).

4. What if the court were wide and short?
   A: Easy to the sides.
   Q: How to send it to the back?
   A: It depends. If it is high, you need time; If it is low, where opponent hasn't got time.
5. When do you have to work hard? --> play

A: Fast to reach the ball.

Q: O.K. but do you move at any other time --> play and see.

A: Yes, when I have thrown the ball, I get in a position to fill my court.

A: Good, this is what we called Recovery and Reaction.

6. You won't win off every throw so you have to manoeuvre your opponent. Can you try? What did you do?

A: Sent to back --> slip a quick throw to the front DIAGONAL --> Diseption

A: O.K. So what have we learnt?

1. win by touching floor.
2. Space away from player.
3. More a player to make a space.
4. 'Recover' to fill up the spaces your side.

A: O.K. Good --> but Volleyball is a team game. Let's try 2 V 2 in a bigger area.

7. How are you going to defend the area? Try.

A: to fill the space.

8. O.K. What if they throw from the side?

Q: Where can the player get the ball to quickly?

How do you change your defence?

A: Slide across a little.

A: O.K. you now understand ONE person on court is not always correct.

A: Let me set you another problem.

Start the game from near the net low underarm throw.

9. O.K. so now we know how to move to cover and defend a court.
10. If we can defend very well they will never score. Where is it easiest to score or win from?

A: near the net.

A: O.K. ---> in Volleyball, how do players get the ball near the net? ---> by passing ---> yes ---> lets try this.

11. I will put in one rule ---> you must PASS HOW YOU RECEIVE THE BALL, eg. underarm or overarm.

A: O.K. How would you like to send ball to their court?

From overhead ---> so how must we pass to front players? ---> overhead.

Q: WHY DOES THIS WORK?

A: Throwing down ---> quick to space ---> less time to move, etc.

A: Yes, Volleyballers try to take the ball above the head all the time.

12. This is getting good ---> lets try 3 V 3 and introduce some rules ---> SLOWLY.

A: Underarm throw serve.

Q: Now how are you going to fill the court?

A: HOW YOU CATCH is how you throw.

Q: If you cannot hit the floor ---> where and how would you send your serve?

A: To the back / also to make them play from LOW ---> Why ---> gives my team TIME to see what they will do.

13. When you receive, what are you going to do?

A: Pass to front? ---> sensible why? Give them no TIME.

14. From back to front to STRAIGHT OVER NET may not work very well, why?

A: Cannot see and Hard to throw.

Q: O.K. so what?

A: Pass across the net? ---> Good, lets see this.
15. AT THIS POINT, speed is important to talk

Q: 1st Pass might give time --> why?

A: To let my side go from defence formation to attack formation.

Q: 2nd Pass might be quick --> why to stop them covering it?

16. HOW CAN WE PASS THE BALL VERY QUICKLY, LETS TRY.

A: O.K. Fast catch throw becomes a hit.
   IF YOU WANT TO HIT --> do so, if you want to catch --> do so.
   So - Teacher : ability.
   Children : experience.
   If in good position --> hit.
   If off balance --> catch.

17. If you want them to score with spike or hit --> lower net --> if it is too generous --> put the net up.

Q: If someone is attacking from ONE side, how will you defend this?

A: Like in the 2 V 2 you have to cover by running sideway as well.
   (LATERAL COVER) & (DEPTH)

Q: If the ball is coming down at you.

A: you move quick and underarm catch.

Q: If you feel good you could dig or dig --> lets look at this shot.

A: Dig --> nice and high

A: Again --> Teacher : Ability
   Children : Experience
   BOUNCE : off bounce, or gentle throw, or a gentle lop. Dig -->
   Set --> Spike.

18. Sometimes I say --> MUST CATCH THE FIRST BALL FROM THE SERVE.
Sometimes I say --> MUST "HIT" THE BALL THAT GOES OVER THE NET (Hits)

19. I am underarm SERVE throw or hit --> let me show you --> option --> if child cannot throw well from the back- option to serve from in the court. Must send it to the opponent's court.
Appendix H

Questionnaire for the 8 P.E. Teachers’ Responses
BASKETBALL / VOLLEYBALL

Traditional Approach / Modified Cognitive Approach/ Cognitive Approach

Teacher’s Response

A. Interest-Enjoyment Dimension.

1. I enjoyed to teach this game very much.
2. I would describe teaching this game is very interesting.
3. I have the interest to adopt this teaching approach in the future.

B. Perceived-Competence Dimension.

1. I am satisfied with my performance at teaching this game.
2. After teaching this game for a while, I felt pretty competent.
3. I couldn’t teach this game very well.

C. Effort-Importance Dimension.

1. It was important to me to teach well at this game.
2. I put a lot of effort into the preparation before teaching.
3. I tried very hard while teaching this game.

D. Tension-Pressure Dimension.

1. I felt tense while teaching this game.
2. I felt pressured while teaching this game.
3. I was very relaxed while teaching this game.
Please circle the number provided to rate how you feel at the moment about the game you have been teaching.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I enjoyed to teach this game very much.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. I would describe teaching this game is very interesting.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. I have the interest to adopt this teaching approach in the future.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. I am satisfied with my performance at teaching this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. After teaching this game for a while, I felt pretty competent.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6. I couldn’t teach this game very well.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7. It was important to me to teach well at this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8. I put a lot of effort into the preparation before teaching.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9. I tried very hard while teaching this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10. I felt tense while teaching this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11. I felt pressured while teaching this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12. I was very relaxed while teaching this game.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Thank You For Your Cooperation
Appendix I

Questionnaire for the 420 Students’ Responses
**Student's Response**

Please circle the number provided to rate how you feel at the moment about the game you have been playing.

<table>
<thead>
<tr>
<th></th>
<th>I enjoy it</th>
<th>I hate it</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>I feel interested</th>
<th>I feel bored</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>I like it</th>
<th>I dislike it</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>It's a lot of fun</th>
<th>It's no fun at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>It's very stimulating</th>
<th>It's is at all stimulating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>It's very refreshing</th>
<th>It’s is at all refreshing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>I understand how the game is to be played</th>
<th>I don’t understand how the game is to be played</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>I know more rules</th>
<th>I know very little about rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>I’m skillful to play the game</th>
<th>I’m less skillful to play the game</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I understand how to win the game tactfully</td>
<td>I don’t understand how to win the game tactfully</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can play at my own ability.</td>
<td>I can’t follow playing the game.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have more confidence in playing the game</td>
<td>I have less confidence in playing the game</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you For Your Cooperation
Appendix J

Comment on the Chinese Translation of the Student’s Questionnaire
To: Mr. LIU Yuk-kwong,
   PE Department

From: Dr. CHAN Ping-chao, Daniel,
      Senior Lecturer
      English Department

Date: 28th June, 1997

Dear Mr. LIU,

   Comment on the Chinese Translation of the Questionnaire

   The Chinese translation is excellent and it is clearly stated. It seems to me that the selection of words is under careful consideration.

Yours sincerely

(Dr. CHAN Ping-chao, Daniel)
Senior Lecturer
English Department
Dear Raymond,

Comment on the Chinese Translation of the Questionnaire

Having gone through the document, I am happy with the translation which can reflect the genuine meaning of the English version. The use of Chinese words is also appropriate.

Regards

(Dr. LI Hau-chung, Victor)
Senior Lecturer,
English Department.
(23-5-1997)
To: Mr. LIU Yuk-kwong, Raymond
   PE Department

From: Dr. CHAN SO Kit-yuk, Anita
      Senior Lecturer,
      English Department

Date: 5-7-1997

Dear Raymond

Re: Comment on the Chinese Translation of the Questionnaire

I have the following comments on your Chinese translation for your consideration.

1. Format: it gives a friendly impression and is similar to the English version.


3. Use of words: the use of Chinese words is well-selected.

Yours sincerely,

(Dr. CHAN SO Kit-yuk, Anita)
Senior Lecturer
English Department
Appendix K

Structure of the Interview Questions
There are six questions for this interview. Based on the references of Schwartz & Jacobs, 1979 & Gilbert, 1993, the structure of conversations is divided into 3 parts including:

(1) openings,
(2) topical sections and
(3) closings

**Part 1 Openings**

**Question/Reply** | **Probe** | **Responses**
--- | --- | ---
Opening remarks | Last year, we did two teaching experiments on Basketball and Volleyball with three different approaches, the skill-based approach, the modified cognitive approach and the TGFU approach. Before each trial, a workshop was conducted to explain the details and a questionnaire was distributed to you. In the questionnaire, there were 5 questions about your feelings and level of confidence to implement the new approach.

In addition, we did another questionnaire after each trial teaching. In the questionnaire, there were 12 questions with 4 dimensions to collect your feedback on interest, effort, importance and competence.

You are now invited to state your view on this new approach. The objective of this interview is to understand your feelings and present situation regarding the implementation of the new approach in your school after one year.

There are 6 questions in the interview and the conversation would take about forty five minutes.

**Part II Topical section**

**Question/Reply** | **Probe** | **Responses**
--- | --- | ---
**Question 1** | I would like to begin by asking the first question. In what way do you feel this approach to games teaching has influenced you? |
Positive reply | This approach has slightly influenced me in my teaching. |
Probe | Can you elaborate on this a little more? |
reply I feel comfortable with it and have changed slightly my approach when teaching.

Negative reply It has no influence on me.

Probe Can you elaborate on this a little more?

reply I do not really know what to do.

Probe Why is that?

reply I feel insecure and less confident with the new approach after the workshop and teaching.

Probe When assessing your feelings in the workshop, you expressed that you felt rather comfortable with it. What happened after the workshop and teaching?

reply I haven’t had any further support after the teaching.

Probe I am not sure that I understand your answer? Can you explain a little more?

reply OPEN ENDED ANSWERS

Question 2 Can you identify ways in which TGFU has influenced your teaching?

Positive reply I have changed my concepts in games teaching and implement the new approach in the lesson.

Probe Tell me a little more about what you have changed?

reply I focus on teaching the games lesson with the concept of understanding the games and tactical awareness. The children enjoy the lesson very much.

Probe What does this new approach mean to you?

reply Technique is no longer the focus of the lesson.

Probe What does that mean to you? Can you explain? Another question could be: What concepts (themes, topics, practices or ideas) have you changed?

Neutral Reply ‘Not too many, just a little’.

Probe Can you help me to understand what that means? Can you give me more details?
I mean that I have shifted the emphasis from teaching of technique to tactical awareness but I think the children should achieve a certain level of technique before they can play the game. Therefore, I teach both in the games lesson.

Probe Can you give me more details?

Negative Reply 'No'. I can’t find any change in my teaching. I still adopt the skill-based approach because the new approach is not practical.

Probe Can you give me more details? Why do you think that has happened?

reply Actually, I tried for a few lesson but it failed. The class was out of control and the children could not play the game well.

Probe Please continue, I would like to know more.

reply At the same time, I really don’t know how to evaluate the performance of the children during the examination.

Probe What is it that makes you unsure? Can you elaborate further?

Question 3

What are the good things about this approach? Let us talk about it from the teacher’s and children’s view.

Do teachers see this approach in a good light? Can you explain further?

Reply I think it is more beneficial for the children than the teacher. From the teacher’s point of view, the good thing is that the teachers’ focus is changed from a concern with control to a concern with student understanding and learning.

Probe How do children react to it? Can you give me examples?

reply The children have a better understanding of the game and tactics and can react properly in the game. They can learn according to their ability and have more opportunity to make decisions.

Probe Really, you have listed many good things about the new approach. Are there any more?
The children have more interaction among themselves.

Yes, is that so?

OPEN ENDED ANSWERS

**Question 4**

Do you see any weaknesses in this approach? Let us discuss this question from two perspectives - teacher's and children's.

Let us look at the weaknesses from the teacher's perspective.

It seems to me that it lacks discipline and the children are rather out of control. They always request to play the game.

Why do you think that occurs?

Yes, but a greater effort must be needed to remind them to play safely and keep the noise lower during the discussion of tactics.

There is another weakness which is about assessment of this new approach. I think the execution of skills is more easily evaluated than the concepts of the new approach. Sometimes, I am not even aware of cognitive student processes.

Can you give me more help in explaining this? or Can you explain your answer a little more?

OPEN ENDED ANSWERS

Let us turn to the children's perspective. What do you think are the weaknesses in this approach?

I realize that by adopting the new approach, the children familiar with the skill-based approach are at a disadvantage. They are unable to change if they have a skill background and are not capable of creative input.

I'm not sure I understand your point. You need to explain this a little more?

I mean that at the beginning, the children cannot follow properly. But after a certain period of time, children who get used to the new approach will eventually overcome this difficulty.
Probe Let us come back to the situation when a small group of children discuss their tactics to create space. Are there any weakness in such practice?

reply To a certain extent, I say 'yes' because it seems that through their discussion, their cognitive experience can be developed. However, their emphasis on the development of cognitive experience are at the expense of the physical.

Probe I don’t think that I follow your answer, please can you give me more information?

reply OPEN ENDED ANSWERS

Question 5 What problems did you face? Can you list them?

Reply The immediate problems that I have faced include the large class size and inadequacy of equipment and facilities. The class size is 40 and they congest in a 'basketball court size' area to play.

Probe Is that all? Do you want to add anything more?

reply There are only two baskets, two pairs of Volleyball poles and Badminton stands. It is really difficult to implement this approach. To overcome this difficulty, I have to prepare a lot of small apparatus by using the hoops as baskets and the ropes as nets.

Probe Apart from the above, are there any more problems?

reply Oh, yes. there are other crucial problems such as lack of resources and management support.

Probe What are they? Tell me more about that.

reply Although I am interested in this new approach, I can’t access any further information. All information is obtained from the workshop and teaching. I am at a dead end.

Probe Please continue.

reply Another worry is that I don’t know how the headteachers perceive this new approach to games teaching. They only observe the lesson from a peripheral perspective. I mean their observation is on the discipline and class control. However, this approach is to encourage children to discuss the tactics. Such an arrangement will give a wrong impression that the children are talking and out of the teacher’s control.
Probe You have such a concern and how do you react to it?

reply I try to influence the headmaster in an appropriate time. I'll explain the rationale and the good things about this new approach to him.

Question 6 What kind of help do PE teachers need for this approach?

Reply I think they need more resources support for this approach in terms of organizing training courses, seminars and workshops.

Probe Why do you say this? Can you list them?

reply The idea comes from my experience. I think the teachers would continue to have a strong intention to implement this new approach unless they have further information about it. Then they can practice it and share with others. Otherwise, they will stop and turn back to the skill-based approach.

Probe I see. Are there any other priorities?

reply To maintain the interest of the teachers, I think they also need an evaluation package for assessing the performance of children. Otherwise they will turn back to assessing the techniques of the children again. Eventually, they will teach techniques in the lesson.

Probe Can you explain why?

reply It is because they have to assess the performance of children in PE twice a year and the grade will be put in the school report.

Probe What are the important elements in the development of an assessment package for this new approach?

reply The understanding of the games and appropriate tactics in the games are two important elements to be assess in the evaluation package. The main reason is that these two elements are the emphases of this approach.

Probe Are there any more types of help that the teachers need?

reply The headmaster's support is also important because it is unfair to have a wrong impression on the performance of the teacher by the headmaster who observes the teacher's class is out of control and noisy.

Probe Is anyone else important?
reply The curriculum officers and the PE inspectors.

Probe In what way?

reply The teachers need a TGFU curriculum which presumably would be developed by the PE curriculum development officer. In addition, the teacher will face difficulties and unnecessary criticism during school inspection when the PE inspector does not support this approach.

Probe How important is this and why?

reply The wiser way to do is let them understand this approach.

Part III Closings

Question/Reply Probe Responses

Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them.

If not, I would like to close our interview.

I’ve really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

Prepared and developed by Raymond LIU
10-5-1997
Appendix L

Transcript of Teachers’ Interview: An Example
Last year, we did two experimental trials of teaching on Basketball with two different approaches, the skill-based approach and the modified cognitive approach (modified TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

After one year, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feelings and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?

I find there is a great difference between the TGFU and the skill-based approach. I have been influenced by the TGFU after the workshop. At present, I start the lesson with a game and tactics first. However, I still teach some techniques in the lessons because with the absence of techniques, I feel the lessons are out of control and not so solid.
RL Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?

SW Firstly, I adopt this approach selectively.

RL How is it? Can you tell me more about that?

SW Selective in the sense that I only teach Basketball and Volleyball with the TGFU approach. I do not teach Handball with this new approach because the passing is so fast that will hurt students easily. So to play safe, I adopt the skill-based approach.

RL What are the other influences on your teaching?

SW Secondly, I change my teaching procedures in the sense that I teach the games first and followed by tactics. The students are more happy and they really learn how to play the game.

RL Are there any more influences?

SW That is all that I can think of. I can supplement it later.

RL For question 3, what are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

SW From teacher’s view, I think one of the good things is that the students are actively participating in the games situation. In addition, those who are not so willing to play show interest in the lesson because all of them are at the same level of performance. However, this is not the case for the skill-based approach, there is a great difference amongst them in skill level which will discourage those with low level of performance.

RL Apart from the above, are there any more good things?

WS Another good thing is that after teaching for so many years, I feel a little bit bored with the skill-based approach. With the TGFU, it gives me a refreshing and stimulating feeling.

RL Can you say me more about the good things?

SW At the present moment, I think that is all.
Right. Let's go to the second part of this question. What are the good things of this approach from the students' view?

To students, this new approach does give more satisfaction. Students have more satisfaction with the TGFU approach.

Can you help me to understand what that means?

First of all, the students have more opportunities to play the game according to their own abilities. Students can learn according to their own abilities. Since this new approach puts emphasis on tactics, creating space, denying space etc. the less able students can still perform well.

In question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

From teacher's view, there is one significant weakness related to class discipline. Students can learn according to their own abilities. Since students are encouraged to talk among themselves on tactics of attack and defence, they will become more noisy. Such circumstance will lead to the dissatisfaction of other colleagues and headmaster on the ability of the PE teacher in class control.

Can you list out more weakness?

I think that is all at the present moment and I can supplement it if I can remember it later.

Can you list them?

I did face many problems after the workshop. They include the lack of supporting materials, the wrong impression of the PE inspectors and the inadequacy of the sports ground.

Can you give me more details? Why do you think that has happened?

Last year, I reported after the workshop that I had confidence to implement it in teaching Basketball because I had got the lesson plan in hand so that I could follow it. Subsequently, I have no further information on this new approach. Therefore, what I need is more information from workshops, conferences, seminars on this new approach from which I can build up my confidence to implement it.

Lack of supporting teaching materials and request to have more workshop, conference and seminar in the future.
Apart from the lack of supporting materials, can you elaborate more?

Another difficulty that I face is the visit of PE inspectors and the perception from the headmaster. My concern is on the ‘loose’ class control during the lesson and the change of teaching ideas. I really do not know how they respond to this new approach. Do they accept it?

Can you give me more details on how to overcome this difficulty?

I learn that this new approach has started to be disseminated in the Institute. It is better to invite the PE inspectors to get involved. Ultimately, they will be influenced and my worry will be diminished. In addition, to influence the perception of the headteacher on this new approach is not difficult. I think as a PE teacher, I need to explain it to him although he may not be interested in it.

Do you have any more difficulties to mention?

The last difficulty, I think, is on the inadequacy of the sports ground. It is really hard to encounter because the size of ground in each school is standardized. The best solution is to reduce the number of students in each class.

Let us move to the last question. What kind of help that PE teachers need for this approach?

The crucial assistance is to observe games teaching with this new approach. It is better to observe a unit of lessons. From the observation, they can identify the differences between the new approach and the skill-based approach. They can understand the emphasis of TGFU approach.

I think another help is the support and encouragement from colleagues. It is better to seek help from those who are familiar to this new approach. Through the support, they can identify the problems and find ways to teach better. Eventually, their confidence will grow.

You have already listed out many helps. Are there any more?

The uncertain views from PE inspectors and headteacher.

Invite PE inspectors to get involved in the TGFU dissemination and explain the TGFU approach to the headteacher.

Inadequacy of sports ground.

To observe TGFU demonstration lesson.

Support from other PE colleagues.
They need more training on adopting this new approach such as attending more conferences, seminars and workshops. Opportunities should also be provided to them to implement it and share with others. The main reason is that they have been trained to adopt the skill-based approach. Therefore, they might not feel so confident to practise this new approach at the initial stage.

Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I’ve really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above data and certify that they are appropriate and correct)

Signature: [Signature]

(CHAN Sek-wing)

Date: 23-5-97
Last year, we did two experimental trials of teaching on Basketball with two different approaches, the skill-based approach and the modified cognitive approach (modified TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

After one year, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?

I have changed significantly from the skill-based approach to the TGFU approach. Now I start to teach with games first and then followed by tactics. However, I also teach some techniques. The main reason for my change is that I feel rather dull with the traditional approach.

Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?
YC I change my concept in games teaching. Previously, I stress the learning of techniques but now my emphasis is on the game itself, the tactics and enjoyment of the students. From the students’ feedback, I learn that they are more happy during the games lessons.

RL Can you list out more ways?

YC As mentioned in question 1, I have changed my teaching approach. When I taught with the skill-based approach, I had much concern for the students’ performance of the techniques. They should follow what I had told them to do. If they did not, I would stop them. However, after adopting the TGFU approach, I was not so rigid and provide more flexibility for the students to think and to develop their cognitive experience.

RL For question 3, what are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

YC From teacher’s perspective, I think there are several good things of the TGFU approach such as, it is more refreshing and stimulating, I have more options to teach games and can identify the potential leadership of the students.

RL I see. Can you explain more on each good thing that you have listed out?

YC Because I have taught so many years with the skill-based approach in games lessons, I feel rather dull and tired. I noticed that this approach did not concern much about the students’ need and ability. Fortunately, I learned this new approach from you last year. I was very excited particularly after the workshop. It was so amazing that this new approach would enable students to have more enjoyment and more thinking opportunities.

RL Can you give me more details on the good things?

YC Oh, yes. There is another good thing about the identification of students’ leadership. What I mean is that during the game or learning tactics, opportunities are given to students in the form of small groups to discuss, think and practise the tactics. Through this process, one or even a few of them will take the lead in discussion and practice. This occasion is evidence for me to identify those who have leadership potential.
RL Are there any more details from the teacher's view? If not, let us move to the students' perspective.

YC From students' view, I notice that they have more enjoyment with this new approach and they feel more happy.

RL What make them have such feeling? Can you explain a little bit?

YC I think the main reason is that the students have more freedom to play the game and they really understand how to play it. Through tactics, they can learn even with low ability. Enjoyment comes from understanding the game & learning with own abilities.

RL Yes, do you have more information to add in? If not, I would like to go to question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

YC From teacher's view, it seems to me that the lesson is not so well-organized in the sense that the students are rather out of control. They are keep on talking and talking. Students are out of control.

RL Apart from that, are there any more?

YC To me, I think this is the only weakness in this approach.

RL Right. how about from students' perspective?

YC Some of them may feel that they just play the game and don't learn anything at all. To learn with nothing.

RL Why do you say so?

YC The main problem is that all students are taught with the skill-based approach during their primary education. They have already got used to learn techniques and skills in the games lesson. Now they learn with a new approach and may have a wrong impression of it because they do not really understand the benefits of it within a short period of time. Don't get used to learning games and tactics instead of techniques.

RL Do you have more additional information. If not, we move to question 5 which is about what problems did you face? Can you list them?
Firstly, this approach has not been promoted widely. At least, if I have difficulties, I cannot share with my colleagues and do not know where to seek support. What I need is more information on this new approach. For example, conference, workshop or seminars should be organized to disseminate this approach to all PE teachers in Hong Kong.

Secondly, I wonder if I can obtain support from the headmaster or colleagues. My concern is the discipline of the class during the lesson since students move freely during the game and much noise is generated. If the headmaster or colleagues don't understand this new approach. They may have a wrong impression of the capability of the teacher.

Thirdly, I still have a feeling that I need to teach some techniques because if there is no technique teaching in the game lesson, I can't get rid of the feeling that the lesson is not so concrete.

The last question is what kind of help that PE teachers need for this approach?

The most important help is to provide them with adequate teaching resources such as the lesson plans, handouts etc. For example, I remember that I had confidence after the workshop because I had a detailed briefing as well as a lesson plan in hand. I could follow it for my trial teaching with this new approach.

The second help is to obtain the support from the headteacher and PE colleagues in school. It is because the lesson with this new approach is comparatively rather loosen in discipline. This will give a wrong impression to the headteacher the lesson is out of order. Additionally, it may reflect that the teacher is incapable of controlling the class.

How to solve it?

I think the teacher must find opportunity to introduce and explain this new approach to the headteacher. Perhaps, the best solution is that there are other PE colleagues practising this approach at the same time. Then, they can support and share among themselves. Obviously, it is more easier to convince the headteacher.

Do you think of other helps for the teacher?
YC Yes, the final help, I think, is to change of PE curriculum on
games teaching.

RL Can you elaborate more on it?

YC With the change of PE curriculum, they can follow it and at
the same time, it may imply that the PE inspector supports
this new approach.

RL Well, I have no more questions, just now. If you have any
questions, I would be happy to try to answer them. If no, I
would like to close our interview. I’ve really enjoyed our
discussion and I appreciate the fact that you agreed to
participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature: 

(WONG Yin-ching)

Date: 23-5-97
Last year, we did two experimental trials of teaching on Basketball with two different approaches, the skill-based approach and the modified cognitive approach (modified TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

After one year, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?

I am very impressed by this approach and have a feeling that the students have more enjoyment with it. At the same time, I learn that this approach is very effective from which I can start the lesson by teaching the game first and then followed by the tactics.

Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?
KM The first influence is on my concept towards games teaching. In the early days, I taught with the breaking down of the techniques and paid much concern to the structure and organization of the lessons. However, my concept is now different. I have to teach games and tactics.

RL Are there any more influences?

KM Yes, in the meantime, I accept the new approach and teach with the elements of this approach in the games lessons.

RL What do you mean by the word ‘elements’? What kinds of elements are they?

KM The elements include the tactics and the rules of the game. Through learning these elements, students would understand how to play the game. Techniques are not important any more in the games lesson.

RL Are there any more influences? If not, I’ll go to question 3. What are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

KM From teacher’s perspective, I feel that the students have more enjoyment with this new approach. Unlike the skill-based approach, they can’t play well in the sense that the techniques are very difficult for them to follow. Ultimately, they feel bored and step back from the lesson. Another good thing is that by adopting the TGFU approach, I can achieve the objective to teach Basketball, i.e. teach the students how to play the game.

RL Would you please elaborate it more?

KM When I teach with the skill-based approach, the target of learning in the game lesson is to learn techniques. How can they achieve the objective to learn how to play Basketball? However, the TGFU does answer the above question. Through the TGFU approach, students do learn how to play the game.

RL What are the other good things from students’ view?

KM I note that it is more refreshing to students. They enjoy it very much and are willing to learn Basketball with this new approach.

RL Can you identify the reasons why they have such feeling?
KM I think that the students have greater flexibility during the lessons. They have more opportunities to play the game and to decide what tactics they would like to implement. They cannot acquire these opportunities from the skill-based approach.

RL For question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

KM It seems to me that there are no significant weaknesses from teacher's view. However, I notice that the TGFU approach cannot be implemented effectively in training skillful Basketball team players.

RL Why do you have such a feeling? Can you explain more on it?

KM It is because the TGFU approach does not emphasize techniques. Obviously, the Basketball team players will perform poorly in techniques.

RL I see. What is your opinion on the weakness of the TGFU approach from students' perspectives?

KM I think the students might share my feeling that their level of techniques is poor by learning with the TGFU approach in the lessons as well as team training. It is more easy to observe when they play with their classmates after school.

RL Are there any more to say?

KM I think that is all.

RL Right. Question 5 is about what problems did you face? Can you list them?

KM Since I have been trained by adopting the skill-based approach in games teaching, it is very difficult for me to prepare the lessons with the TGFU approach. In fact, this is not the case when I thought of my feelings after the workshop last year. By that time, I was rather confident with it. The main reason is that I got a lesson plan in my hand which I could follow to teach.

RL Apart from that, what other problems that you have in mind?
KM  I find that the sports ground in my school is inadequate. There are too many small groups congested in a Basketball-size open area to play the game particularly when introducing to use the breadth of the court. The best solution is to allow some groups to have a short break to observe others' practice. This might give a wrong impression to the headmaster or supervisors thinking that I am not teaching properly. I really have such kind of stress.

RL  Are there any more difficulties?

KM  Yes, there is another one on assessment. I really do not know how to assess the students objectively by adopting this new approach. It is inappropriate and unfair to assess their levels of performance in techniques.

RL  What is your suggestion on it?

KM  I think I need to assess them on the performance in the game and the appropriateness to implement the tactics in particular game situations. But still I worry about the objectivity of these kind of assessment.

RL  Let us move to the last question about what kind of help that PE teachers need for this approach?

KM  The teachers should need more detailed information such as lesson plans, video-tape of the TGFU approach. I do believe that they will have more confidence because they can follow how to implement it.

RL  Do you have any more suggestions?

KM  Certainly, the best assistance is to invite them to observe a demonstration lesson of game with the TGFU approach. If possible, the more the demonstration lessons, the better the understanding of this new approach.

RL  Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I've really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature: (CHAN Ka-ming)  Date: 24/4/97

302
Last year, we did two experimental trials of teaching on Basketball with two different approaches, the skill-based approach and the modified cognitive approach (modified TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

After one year, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?

Since I have been trained to practise the skill-based approach in games teaching, I feel the TGFU approach is refreshing and exciting particularly after attending the workshop last year. To a certain extent, I have changed my teaching style and adopt the new approach. However, such change is limited by my knowledge of the new approach.
Right. Let us move to question 2. **Can you identify ways in which TGFU has influenced your teaching?**

So far, I notice that I have changed my teaching approach and concepts on games teaching. Now I teach games lessons by starting with the game itself first and then followed by the tactics. To me, there are two changes in concepts. Firstly, I change my thinking on the whole concept of games teaching. For example, I no longer perceive technique as the key element in the games lessons. In addition, the game itself is a problem and as a PE teacher, I should enable them to learn how to solve it. Secondly, I'll pay much concern to responses from the students. Do they enjoy the lesson is a key element. I understand that the skill-based approach cannot provide much enjoyment to the students. To compensate it, the TGFU can give assistance. Through learning the game and tactics, they have more enjoyment.

Do you have any more supplement on it?

No. I cannot think of any more.

Then, let us go to question 3. **What are the good things of this approach? Let us talk about from the teacher's view and the children's view.**

From teacher's perspective, I perceive it as a light for games teaching. It provides new ideas and concepts.

Really, are there any more?

Yes, I notice that by teaching students tactics, they are challenged by making decision how to play the game. This is a good experience for the students. This is what I much appreciate.

Apart from that, what are the students' view?

Comparatively, the students know more about the game. They can make appropriate response during the game. This good thing is also suitable for students even with lower abilities. Unlike learning technique, the low ability students will face more difficulties to learn technique.

What will be the consequence? Would like elaborate more?
KW The consequence is that the low ability students will drop out subsequently because they cannot find any enjoyment here. However, the TGFU approach can provide more enjoyment for students.

RL If you have no further supplement, we shall move to question 4. Do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher’s and children’s view.

KW From teacher’s view, I do not see any significant weaknesses in this new approach. However, I have one concern with class discipline during the lesson. Owing to the encouragement of students to talk and discuss how to play the game, the class discipline is rather loosen in the sense that they have more opportunities to talk and always moving around without learning.

RL I see. How do feel?

KW Actually, it is not a serious problem because I always remind myself that it is inappropriate to perceive a lesson with a yardstick set by the skill-based approach. However, my concern is the impression from outsiders who do not know about the TGFU approach.

RL Right. Let us talk about the weaknesses from the students’ view. Would you talk something about that?

KW Some students say to me that they learn nothing during the lesson. They have no such feeling in the first few lessons but it is more apparent in the latter part of the unit of game lesson. Their concern is on the inadequacy of learning of techniques.

RL Why do they have such a feeling?

KW The main reason is that they have already get used to the skill-based approach since they were in the primary school.

RL I see. Do you have any more stuff to add in? If not, question 5 is about what problems did you face? Can you list them?

KW I have faced several problems including the lack of support from experts, inadequate provision of information and the mis-perception from school management.
On the lack of support from experts, I feel deeply that after the workshop last year, I was so lonely when I faced the problem during teaching with the TGFU approach. I really did not know who I could share except you. The main reason is that the TGFU is really new in Hong Kong.

**Lack of support from experts.**

**RL** I see. Do not worry and it is my pleasure to share with you whenever you have any problems in the future. Would you please elaborate about your second problem, the inadequacy provision of information?

**KW** I did enjoy the workshop in this March which I looked forward to it. The main reason is that I have opportunity to understand in-depth the TFGU approach. In the workshop, I was enlightened to the ideas and the implementation of the TFGU. Explicitly, I was so confident after the workshop. I hope more seminar or conferences will be organized in the future.

**No opportunity to understand in-depth of the TFGU.**

**RL** Have you got further elaboration on this point? If no, let us go to your last problem on the mis-perception of the TGFU from the school management. Would you please tell me something about it?

**KW** My concern is that I do not know how the headteacher perceive my teaching ability in game lesson with the TGFU approach when he observed the lesson which was not properly taught with good discipline. Understandably, he does not know the characteristics of the TGFU approach. He might have an impression that I am not teaching the class properly.

**Worry about the wrong impression from headteacher.**

**RL** Apart from the above problems, are there any more that you want to add in or supplement?

**KW** No, thanks

**RL** Now, let us go to the last question. **What kind of help that PE teachers need for this approach?**

**KW** With reference to my problems, I think they should need more support in terms of lesson plans and materials showing the way how to implement it. That means demonstration lessons should be organized because what they observe can serve as a foundation for them to follow.

**Need more teaching resources support.**

**RL** What other helps that you think they need?
KW  Yes, I think they should need a prerequisite of the TGFU approach before they graduate from the PE teacher training Institute. The crucial point is to introduce this new approach to the PE student-teachers in the Institute so that they have, at least, heard of it and understand what it is. Like me, I heard it from you and then participated in this project. When I taught in this school for two years, I realized that my PE colleagues did not know what it was.

RL  Are there any more to supplement?

KW  They should need assistance from their PE counterparts and the school management. With these support, they can teach without any worry.

RL  Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I've really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature : LAI Kar-wai
Date : 25-5-97
Last year, we did three experimental trials of teaching on Volleyball with three different approaches, the skill-based approach, the modified cognitive approach (modified TGFU) and the cognitive approach (TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

Again, another workshop was conducted to introduce the 'genuine' cognitive approach and demonstration was also arranged. The same questionnaires with 5 questions after the workshop and 12 questions after the trial of teaching were distributed to collect your feedback.

One year later, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. **In what way do you feel this approach to games teaching has influenced you?**

I have changed a lot in my teaching in the sense that I start the lesson by teaching games and tactics first and techniques no longer become the important elements.
Would you please tell me your reason why say so?

Simply, it is because I teach in a ‘Band 5’ school and the students are not well behave. The TGFU is beneficial to me as well as the students. They are highly motivated to play the game during lessons and less conflict created between teachers and students which enables the teacher to teach better.

I see. Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?

I have mentioned earlier that I changed my style of teaching. For example, in the skill-based approach, students are requested to learn technique and follow my instruction whereas in the TGFU approach, they learn the game first followed by tactics. During the lesson, they are allowed to discuss and decide how to play it. Of course, guideline will be provided for them. The students welcome and enjoy this kind of approach to learning games.

Would you please tell me more about the influence?

Well, I have changed my concept towards games teaching. I am aware that there is a wrong impression that we teach students how to play the game in the skill-based approach. I mean we really cannot teach students to learn how to play the game through learning techniques. The key concept should be the game itself. That means I need to teach games and tactics to enable them to learn how to play.

Are there any more supplement?

Yes, one more influence is on the perception of enjoyment from the students. I’ll never think of teaching techniques which will not enable a majority of students to obtain enjoyment.

How is your feeling now?

With more understanding of the TGFU and reflection on the skill-based approach, I now realize that the TGFU does provide them with enjoyment and they really know how to play the game.

For question 3, what are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.
TK One of the good things is about conflict between teacher and student which I have mentioned earlier. The TGFU approach does enable me to have less confrontation with my students because they are so happy and busy in playing the game.

Another good thing is that by adopting the TGFU approach, students have more flexibility to learn. They can learn according to their own pace and decide their own tactics. However, this is not the case in the skill-based approach which is so rigid and structured in the sense that students must learn techniques.

RL How about from the students' view?

TK The students are more happy and learn with more enjoyment. In addition, I notice that to a certain extent, students are always challenged with problems and they need to tackle them. Eventually, with this kind of training, it is not only beneficial in games lessons but also provide positive influence on their attitude towards their daily life.

RL Do you want to supplement more from students' perspective?

TK I think that is all.

RL Well, let us move to next question. In question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

TK To my knowledge, I wonder about the subjectivity of the assessment on the performance of students by adopting the TGFU approach. Unlike the skill-based approach, techniques are comparatively more easy to quantity and assess students' performance. However, this is not the case in this new approach which I need to assess their performance in games and tactics. This is my only concern about the weakness with the TGFU approach.

RL What are the weaknesses from students' perspective?

TK I think if the students are skilful and well disciplined, they might feel a little bit disappointed with this new approach during the games lesson.

RL Would you please elaborate a little on that?
The main reason is that those students are familiar with the games, rules as well as tactics. It seems that they feel the lesson is not challenging and stimulating.

I see. Question 5 is about **what problems did you face?** Can you list them?

There are several problems that I have. Firstly, I understand that the TGFU approach is new in Hong Kong so I have little knowledge about it. This limitation gives adverse effect to my implementation of it.

The inadequacy of PE facilities and equipment is another difficulty that I have faced. Comparatively, the new approach needs more areas to play the game while the skill-based approach is more structured and less area is needed. In addition, there are not too many stands and nets for playing Volleyball in each school. This inadequacy of equipment had given a bad effect in implementation of the new approach.

Apart from the above, are there any more difficulties that you have faced?

Yes. The third difficulty is about evaluation. I do not know how to evaluate myself in adopting this new approach. I always ask myself if am I on the right track or even am I correctly implementing the TGFU approach.

The last question is **what kind of help that PE teachers need for this approach?**

The urgent need is to help PE teachers by providing them with more information about TGFU such as attending the TGFU course. For example, the workshop in this March is very helpful.

In addition, I think if this is a good approach, it is better to implement it in the Institute first. That means all student-teachers in the Institute should be trained to implement this new approach in games teaching before they graduate.

Are there any more help that you think PE teachers need?
I think more supporting materials are needed. Can you remember that you provided me a sample of questionnaire to collect students' feeling after the teaching trial. It is good because if the students feel happy with this approach, more encouragement must be given to the teacher.

Would you please tell me more about teachers' help?

My school has a high expectation with discipline in PE lesson. I have a feeling that by adopting the TGFU approach, the lesson is rather loose in discipline because the students are encouraged to play and move freely in the court. Such situation will give an impression to the headteacher that the lessons are not well organized or taught properly. PE teachers must need to solve it before they have a strong will to adopt it.

How to help them to have a strong intention to adopt the TGFU approach?

I think the best way is to explain to the headteacher directly about the characteristics of this new approach. Let him understand what it is.

Are there any more helps that you can think of?

No. Thanks.

Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I've really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature: [Signature]

(LAM Tak-keung)

Date: 25-5-97
Last year, we did three experimental trials of teaching on Volleyball with three different approaches, the skill-based approach, the modified cognitive approach (modified TGFU) and the cognitive approach (TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

Again, another workshop was conducted to introduce the 'genuine' cognitive approach and demonstration was also arranged. The same questionnaires with 5 questions after the workshop and 12 questions after the trial of teaching were distributed to collect your feedback.

One year later, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. **In what way do you feel this approach to games teaching has influenced you?**

I start to teach the games first followed by the use of spaces. In addition, I notice that the students feel more enjoyment in learning Volleyball. **Have change in teaching style.**
RL Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?

WP Firstly, I have already shifted the emphasis from teaching techniques to the games and rules. I no longer teach techniques as the objective of the lesson. Alternatively, I start the lesson with the game first and followed by tactics. The students seem much happier with this new teaching approach.

Secondly, I have also changed my concepts in teaching ball games. The games and the tactics become the major elements in the lessons while techniques only play a minor role when it is needed.

RL Except these two influences, are there any more?

WP So far, I can think of these two.

RL Right. Let us move to the next question. What are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

WP From the teacher’s view, I feel rather bored and dull with TGFU is stimulating the skill-based approach because I have taught with it for 7 years. I need some changes and the TGFU gives me new concepts in teaching games lessons. It is so stimulating and refreshing to me.

RL Are there any more good things from your view?

WP That is it. I think this is most important to me.

RL Would you elaborate more from students’ perspectives?

WP With this new approach, the students have a clear objective in mind that they learn how to play Volleyball. Unlike the skill-based approach, they learn techniques only and don’t know how to apply the learned techniques in the game situation. Therefore, when they play Volleyball, they really don’t know how to react in different game situations.

RL I see. Are there any more good things?

WP Yes, there is one more. I notice that the students can also learn how to play the Volleyball happily even with different abilities. They do not need to practise digging very well before they play Volleyball.
RL In question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher’s and children’s view.

WP I have a little worry with this approach. I notice that because the emphasis of this new approach shifts from techniques to tactics, I wonder if the students can play the game with a certain level of technique. If they can’t play well, how can they enjoy it? This is my own view on the weakness of the TGFU approach.

RL Right. How about from the students’ view to see any weaknesses in this approach?

WP I think those students who are team members would feel this approach is rather childish but those who have low abilities would feel it is very challenging.

RL Why do think the students’ have such feeling? Would you please tell me more about that?

WP It is very easy to understand that for the team members, they are already familiar with adopting different tactics in tackling different games situation. If teacher adopt this approach, they might feel a little bit dull. However this is not the case for other students particularly for those with low abilities. Previously, they dropped out from game lessons because they could not perform well in techniques. But now it is entirely different because what they learn is the games, rules and tactics which are quite easy to follow. Eventually, they will find enjoyment on it.

RL I see. If there is no further opinion, shall we move to question 5. What problems did you face? Can you list them?

WP There are several problems that I have faced. The first is on the size of the playground. It seems that the students playing Volleyball with tactics should always move around. They need more free areas to run. However, I teach Volleyball with this new approach in a Basketball size court which cannot accommodate 40 students. At the same time, the class size is another problem. there are too many students congested in that area. Obviously, the teacher cannot manage them properly.

RL I see. How to overcome these two difficulties?
WP I think the ground should be larger and the class size should be reduced from 40 to 35 in each class.

RL Is that all? Do you want to list out your difficulties?

WP I need more information about this new approach and someone to tell me how to teach properly. Because this is new in Hong Kong, more conferences, seminars or demonstration lessons are needed.

In addition, there is another difficulty that I need to mention. It is about the assessment which I really do not know how to do it. I can assess their performance in Volleyball techniques. On the other hand, if I assess the students in understanding the games, I haven’t got such information. Ultimately, I will go back to the “old” approach again.

RL I see. Are there any more? If not, I suggest we go to the last question. What kind of help that PE teachers need for this approach?

WP The teachers must have adequate teaching material to follow such as the lesson plans. At the same time, they can get help from someone whenever they have difficulties.

RL Would you please suggest some solutions?

WP I think this is the job of the PE inspectors who should take the lead to introduce this approach to teachers by means of organizing seminars or workshops. Demonstration lessons should be conducted for teachers to observe how to implement this new approach in teaching ball games.

RL Apart from that, are there any more helps that you think PE teachers need?

WP I think that is all.

RL Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I’ve really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.
(I have read through the above and certify that the content is correct)

Signature: 

(EAU Wai-ping)

Date: 26-5-97
Last year, we did three experimental trials of teaching on Volleyball with three different approaches, the skill-based approach, the modified cognitive approach (modified TGFU) and the cognitive approach (TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

Again, another workshop was conducted to introduce the 'genuine' cognitive approach and demonstration was also arranged. The same questionnaires with 5 questions after the workshop and 12 questions after the trial of teaching were distributed to collect your feedback.

One year later, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feeling and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?
I have changed my teaching style after the workshop last year but I do not know whether I am correct or not. I sometimes teach with technique. Certainly, I understand that techniques are no longer the crucial element in the games lesson.

Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?

As I point out earlier, I change my teaching style by starting the lesson with the game and followed by tactics. I found that the students did enjoy it very much. In addition, I have changed my concepts on games in the sense that learning the game itself should be the crucial element and techniques are no longer a heavy emphasis in a lesson.

What else you have identified in which TGFU has influenced you?

One more point that I want to stress is on the topic of enjoyment. Previously, I didn’t realize why the students dropped out from the lessons. I always asked myself that am I teaching too fast or too hard for them. However, I started to understand that the problems did come from learning of techniques. By adopting the TGFU, the students learn how to play the game first and then the tactics. They can follow the progression even the students with low abilities. Gradually, they have fun in it.

Do you have any more to supplement? If no, we shall go to question 3. What are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

From teacher’s perspective, I think it is very refreshing and can serve as an alternative for PE teachers to teach games in the PE lessons. It is also beneficial for students to learn the games and tactics according to their own pace. Through the discussion of tactics, they are exposed to the problems which they need to tackle. Such process is a good training for the development of decision making in their daily life.

Are there any more? If not, what is the students’ view?
From students' view, they should be more happy when compared with the skill-based approach. They really know how to make appropriate response during the game situation. In addition, they have more flexibility to learn to discuss the tactics according to their own pace.

In question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

To me, my concern is on the loosen class control in the lesson with the TGFU approach. Students are moving around, playing the game and talking about how to create spaces and deny spaces. This is entirely different from the skill-based approach which is so highly structured that students have less flexibility in learning. Sometimes, I really do not know how to handle the class discipline properly.

Do you want to elaborate any more information on this point?

No. That is all.

Right, Let us turn to the students' view. Would you please tell me about it?

They might probably feel that they are inferior with others when they play Volleyball after school. Comparatively, they cannot serve, set and spike the ball so well during the game lessons because the emphasis in learning Volleyball is no longer learning the techniques of Volleyball. That is the main reason why they have such feeling.

Shall we move to question 5 if you have no further elaboration? The question is about what problems did you face? Can you list them?

I have faced a number of problems and some of them are minor ones. Firstly, I lack support in teaching resources. Last year after the workshop, I remembered that I provided an answer in the questionnaire with positive feedback. I reflected that I had adequate confidence to teach with the TGFU approach because I had heard of the detailed introduction of the TGFU as well as the lesson plans in hand. Within this year, I had tried to teach other games with this new approach but I needed to develop my own lesson plans. I wondered whether I did it properly.

I see. Would you please tell me more about your problems?
Secondly, I find no support when I had difficulties. Apart to talk to you, there was no other ways to enhance my understanding of this new approach.

RL What is your suggestion to solve this problem?

HW Like this March, there was a workshop conducted by Mr. Rod Thorpe. This is a good opportunity to enable interested teachers to understand in depth about the TGFU. I hope that there will be more workshops, seminars or conference on it. Through these occasions, I can grasp more ideas on this new approach.

RL Do you have any more problems?

HW Yes, it is about class discipline. Sometimes, I really cannot stop them talking so loud and moving around disorderly. I stop the class to restore the order. I understand that this is not a good way which does interrupt the lesson. Sometimes, I feel very disappointed when I face this problem.

RL Right. Would you please tell me more?

HW The next problem is about the assessment which I cannot solve it. I really do not know how to assess objectively when I taught with the TGFU approach. It seems to me that I can set a marking scheme to assess the students’ performance on techniques. But this is not the case for this new approach because the game situation is unpredictable in every second and it is not easy to assess the performance of students within the game situation objectively.

RL Do you want to elaborate more about the problems?

HW I think that is all in the meantime.

RL Shall we move to the last question. What kind of help that PE teachers need for this approach?

HW The crucial help which I think is to provide them with teaching materials and demonstration lessons. They need lesson plans to follow and demonstration lesson to learn how to teach. In addition, regular seminars or workshops should be organized to develop their understanding on this new approach.

RL Would you please tell me more about this topic?
HW The assessment method should be clearly determined to enable them to learn how to assess students in a properly way. Otherwise, they will go back to assess the students’ performance in techniques. This is actually unfair to students. Eventually, they even go back to teach games with the skill-based approach again.

RL Are there any more information that you want to supplement?

HW No. Thanks.

RL Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I’ve really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature: [Signature]

(Li Hing-wah)

Date: [Date]
Last year, we did three experimental trials of teaching on Volleyball with three different approaches, the skill-based approach, the modified cognitive approach (modified TGFU) and the cognitive approach (TGFU). Before teaching, a workshop was conducted to explain the details of the modified cognitive approach and demonstration was also followed. Subsequently, two sets of lesson plans were distributed for reference. After the workshop, a questionnaire with 5 questions was distributed to you for collecting your feelings and level of confidence to implement the new approach.

In addition, we also did another questionnaire after each trial. The questionnaire had 12 questions which was used to collect your feelings on 4 dimensions including interest, effort, importance and competence.

Again, another workshop was conducted to introduce the ‘genuine’ cognitive approach and demonstration was also arranged. The same questionnaires with 5 questions after the workshop and 12 questions after the trial of teaching were distributed to collect your feedback.

One year later, you are now again invited to reflect your view on this new approach. The objective of this interview is to understand your feelings and present situation for the implementation of the new approach in your school. There are 6 questions in the interview and the conversation would take about 45 minutes.

I would like to start by asking the first question. In what way do you feel this approach to games teaching has influenced you?
YL I deeply believe that the TGFU is beneficial to students in games lesson. Owing to this reason, I changed my teaching style by adopting this new approach but I have reservation about it. Sometimes I teach techniques because I don’t have adequate confidence to continue with this new approach.

RL Let us move to question 2. Can you identify ways in which TGFU has influenced your teaching?

YL After the last year's workshop, I always start teaching the lesson with the game and followed by tactics first. However, if I find that the students cannot play the game well, I’ll teach them techniques of serving, spiking respectively.

Another way that I identify is on the ideas of game. I learn that the game and tactics are two key elements in games lessons. These two elements will enable students to understand the game and play wisely. Through these elements, all students with different abilities can follow the game and perform properly.

RL Do you have any further supplement on it?

YL That is all for I can think of.

RL For question 3, what are the good things of this approach? Let us talk about from the teacher’s view and the children’s view.

YL As I have mentioned in question 1, I believe that the TGFU approach is beneficial to students. This is one of the good things. In addition, this new approach provides more flexibility for students in the learning process. The students are encouraged to think how to decide appropriate responses in the game situation. This kind of learning process cannot be found in the skill-based approach. Apart from that, the students can also learn at their own individual pace.

RL Would you please tell me more about it?

YL From the students’ view, they know how to play the game wisely in the sense that they can perform properly and make appropriate response during the game situation. In addition, they learn with more enjoyment because they do not need to follow the sophisticated techniques in Volleyball.

RL Are there any more good things that you want to add?

It is beneficial to students in terms of greater flexibility in learning.

Students know how to make appropriate response in games and have more enjoyment.
That is it.

Shall we move to the next question? In question 4, do you see any weaknesses in this approach? Similarly, let us answer this question from two perspectives, teacher's and children's view.

From the teacher's view, I think there are two weaknesses in the TGFU approach. Firstly, I worry that students cannot play the game well due to their low level of technique performance. Although they can react properly in the game situation, they cannot perform as they wish in terms of techniques. This will hamper their performance in the game.

Secondly, my concern is with class control. On one way, I do encourage students to talk amongst each other on the tactics but on the other way, I cannot control the class in good discipline. They are so noisy and free during the lesson. This is one of the weaknesses of the TGFU.

Apart from the above, would you tell me more about the weaknesses from students' perspective?

The students have a feeling that they learn nothing in the Volleyball lesson because techniques are not the emphasis of the lesson. Their main concern is that they cannot play so well as others after school.

Why do they have such a feeling?

In fact, it may be that they used to the skill-based approach in their primary school education. At least, they can perform serving, setting and spiking in a proper way. Now the emphasis is on game and tactics which is entirely different from learning techniques.

Within this year, I have faced several major problems that I would like to raise. For example, the first is about the class discipline. Sometimes I really cannot control the class. They are so free and noisy to a certain degree that it seems to me they are not learning. I really cannot tolerate such occasions. Obviously, I stop them being so noisy and free.
The other problem is about the assessment. I really do not know how to assess objectively the TGFU approach. I understand that the assessment content is no longer on techniques. The appropriate content should be on game and tactics which they are unpredictable.

**RL** Apart from that, do you have any more to add in?

**YL** Yes, I have inadequate or even no support in adopting the new approach.

**RL** Would you please tell me more about that?

**YL** I need more support with teaching resources. Last year, I got adequate confidence to teach Volleyball after the workshop, mainly due to the lesson plans and handouts. Like the workshop organized this March, I appreciated it very much because I can understand in depth about the TGFU and observe a series of demonstration lessons.

**RL** Are there any more you want to add?

**YL** the last one is about the perception of the PE inspector with TGFU. It seems to me that TGFU is introduced by you in the Institute. I seldom hear any comment and view from the PE inspectors. By this September, I will be inspected when I teach PE. Honestly, it is save to teach games by the skill-based approach.

**RL** Do you have any suggestion to solve this problem?

**YL** I think the PE inspectorate and you, at least, should jointly organize seminar or conference on this new approach for PE teachers in the future. This cooperation will give a signal to PE teachers that they support it.

**RL** The last question is what kind of help that PE teachers need for this approach?

**YL** They need lesson plans and demonstration lessons in which they can follow the step to teach and know how to teach. In advance, they should know the rationale and the characteristics of the TGFU. With these supplements, they might probably have adequate confidence to practise with this approach.

**RL** Is that all? Would you please tell me more?
YL In addition, they should be provided with a contact with other interested PE teachers whenever they face difficulties. Through this channel, they can share their feelings with the new approach. In line with this, I think they also need more workshops, conference and seminars. By attending these meeting, they will have an in-depth understanding of the new approach.

RL Do you need to add in more things?

YL Although it is not so important, I think they should need support from their school management so as to reduce any unnecessary problems.

RL Well, I have no more questions, just now. If you have any questions, I would be happy to try to answer them. If no, I would like to close our interview. I’ve really enjoyed our discussion and I appreciate the fact that you agreed to participate in the study. Thank you very much.

(I have read through the above and certify that the content is correct)

Signature: LEUNG Yuk-lin

Date: 29-4-87

Need to build up a link with other interested teachers.

Need support from school management.