Development and Description of the Tools
CHAPTER - II

DEVELOPMENT AND DESCRIPTION OF THE TOOLS

After studying the goals of lower secondary school curriculum B.E. 2521 (Revised Version 1990) in the present development perspective, the problem, objectives, were discussed in the preceding chapters. Also the philosophy and function of school administration in the lower secondary school curriculum implementation in the educational region-I were discussed. The present chapter has been devoted to development and description of the tools. The problems perceived by functionaries on the aspects of curriculum documents, teaching programme into different subjects, learning programme, activities of instruction and media, activities of special teaching, guidance, remedial teaching, evaluation, supervision and teaching arrangement and placement were identified. Among the school functionaries, the school administrators, teachers and students were taken for the investigation. The planning and development of the administrator's interview, teacher's questionnaires and student's questionnaires description of the tools have been presented below:

2.1 Administrator Interview

The tool used for the present study was constructed by Malakul and others (1985: 185-200) for interviewing the
school administrators and was adapted by Chutamanee (1988). It was then improved in light of the data on each item and opinion of school administrator and teachers from private schools and government secondary schools in Bangkok Metropolis. The administrator's who have the experience in research were consulted for checking the content of the tool. One administrator per school was interviewed for collecting information on the tool. The tool was divided into four parts viz :

- Personal information ;
- Conditions of implementation of the curriculum ;
- Validation of the tool ; and
- Scoring procedure.

2.1.1 **Personal Information**

It includes the items inquiring the position, duration of the job, educational qualifications, utilization of the proposed curriculum. The items were of short answer and open-end type demanding answers in one or two sentences or tick marking the correct response.

2.1.2 **Conditions for Implementation of Curriculum**

This was further divided into ten units demanding information for the following aspects in each area like :
a) Curriculum documents 
b) Teaching programme 
c) Learning programme 
d) Activities of instruction and media 
e) Activities of special teaching 
f) Remedial teaching 
g) Guidance 
h) Evaluation 
i) Supervision 
j) Teaching arrangement and placement

2.1.3 Validation of the Tool

For the instrument used in the present study, the validity of the administrator’s interview was judged on the basis of the opinion of the experts in the Srinakharinwirot University in Thailand and the supervisor. The tool was translated into English language by the researcher and given to the experts from the department of education of the Panjab University, Chandigarh, for their comments with regard to the purpose of the items. Their suggestions were duly incorporated in the final draft. The draft was used for a small group of 10 administrators twice to ensure that it yields consistent information. The final draft has been enclosed in the Appendix - A.
2.1.4 **Summarising Procedure**

The information about the problems and recommendation of school administrators regarding the usage of lower secondary school curriculum B.E. 2521 (Revised Version 1990) was gathered through the open-end questionnaires and analysed by the content analysis method. Details of the responses of each individual were calculated in percentage.

2.2 **Teacher Questionnaire**

This specific section was meant for the teachers who are teaching in the secondary schools of the educational region-I in academic year 1992 in Thailand from the secondary schools in the different subjects as given below:

- Thai Language
- English Language
- Mathematics
- Science
- Social Studies
- Health Education
- Art Education
- Work Education
- Career Education

This part studies the process and activities in implementation of lower secondary school curriculum B.E.2521 (Revised Version 1990) on the basis of the perception of the
three groups of teachers one from large, another from medium and third from small secondary schools.

2.2.1 **Construction of the Tool**

It was constructed by Chankawang (1981: 174-185) and Boonlon (1981: 151-177) to study the perception of teachers and educators towards the problems of implementation of lower secondary school curriculum B.E. 2521 in educational region I and IX. This tool was adapted by Chutamanee (1988) to follow-up the study of the implementation of the B.E. 2521 lower secondary school curriculum in private schools in Bangkok Metropolis and then improved upon by combining data from school administrators and teachers in the private government secondary schools in Bangkok area by the investigator. The teacher’s questionnaire was taken to the adviser and the expert for checking items with respect to language to cover all the desirable aspects. The questionnaire was divided into 7 main parts viz:

- Personal information
- School readiness
- Curriculum implementation
- Problems and its causes to solve the problems
- Suggestion for the instruction
- Validation of the tool
- Scoring procedure
2.2.1.1 Personal Information

This part includes 8-items enquiring about the position, experience, educational qualifications and utilization of the proposed curriculum. The items were of short answer type, alternate response type and check-list type.

2.2.1.2 School Readiness

Materials and sources for teaching and learning consists of 45 items of check-list type. The respondents were expected to give a response on a three point scale viz: "enough", "not enough", and "not any" as follows:

1) The items for school facilities like: laboratories, maths room, room for demonstration etc. (items 11).

2) Facilities for sports: basketball court, football field etc. (items 6).

3) Technological gadgets like: tape recorders, projectors, cassette, moving picture etc. (items 11).

4) Material instruments like modern musical instruments (items 5).

5) Tools of machines for workshops like tools for factory etc. (items 3).

6) Reading materials: books, general reading etc. (items 9).
2.2.1.3 Curriculum Implementation

The data pertaining to the perception of the teachers regarding the curriculum implementation of the revised version in 1990 in secondary schools is based on the checklist of 52 items. Each statement was followed by a 6 point scale viz: very much, moderate, little, very little and not at all.

The items were covered in respect of the process of implementation in the curriculum as follows:

1) Curriculum documents like laboratory, academic documents for teachers, the aim of curriculum provided to student etc. (items 5).

2) Teaching and learning programme like course of subject, activities in the class-room, self-study etc. (items 3).

3) Activities of instruction and media: teaching and learning activities in order to help new students to develop an ability to solve problems, teaching media, workshop etc. (items 10).

4) Activities of special teaching : extra-curricular activities for the students and to serve their interest and aptitude etc. (items 3).
5) Guidance service: it is provided for students to choose a course of study etc. (items 7).

6) Remedial teaching: there is co-operation for the purpose of remedial teaching. Remedial teaching is held after pretest and given to weak students etc. (items 8).

7) Evaluation: Pre-test is administered to check general and basic knowledge of a student, teacher follows a guideline of school's evaluation etc. (items 9).

8) Supervision: Innovative aids for teaching are provided to teachers etc. (items 2).

9) Teaching arrangement and placement: opportunity for teacher's placement according to aptitude and ability are provided for teaching etc. (items 5).

2.2.1.4 Problems and its Causes to Solve the Problems of Implementation

This was further divided into the problems and its causes including how to solve the problem of lower secondary school curriculum implementation. The items were of short answer and open-end type demanding information on the aspects in the area of the process of curriculum implementation and through the content analysis method, the sample item have been given as follows:

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### Categories of How to solve the Problem

<table>
<thead>
<tr>
<th>Cause</th>
<th>How to solve the Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Curriculum documents</td>
<td>The curriculum documents were inadequately supported and slowly delivered</td>
</tr>
</tbody>
</table>

#### 2.2.1.5 Suggestions for the Instructions

In order to utilize and implement the lower secondary school curriculum B.E. 2521 (Revised Version 1990) derived from the teachers to give recommendation for the most effective arrangement of teaching and instructional activities in their schools. The items were of short answer type, open-end type and fill in the blanks type demanding information for different aspects of the process of curriculum implementation.

#### 2.2.1.6 Validation of the Tool

The tool used in the present study was validated by Chankawang (1981: 174-185) and Boonlon (1981: 151-177). The investigator adapted and improved it on the basis of the opinion of the adviser and the experts on the items and their language and coverage of the content. The researcher gave the tool to the 3-experts from the Department of Education, Panjab University, Chandigarh, for their comments with regard to the purpose of the items structure and language etc. The detailed suggestions were duly in-
cooperated. The investigator tried out the questionnaire on the group of students of "Sesawes School" in Bangkok. The coefficient of reliability (Cronbach, 1970)* was calculated. The reliability of the questionnaire was computed with the help of the test-retest method and was found to be 0.93. It suggests that the tool is reliable and can be used for collecting data.

2.2.1.7 Scoring Procedure

For the problems and suggestions of the teachers dealing with the usage of lower secondary school curriculum B.E. 2521 (Revised Version 1990), the information was collected partly by check-list along with 3-6 point scale and partly by fill in the blank type and short answer type of items. The scores were analyzed in 'percentage'. The detail of questionnaires is given in Appendix - A.

\[
* \quad r = \frac{k}{k-1} \left[ 1 - \frac{\sum S_i^2}{S_t^2} \right]
\]

- \( r \) = Coefficient of reliability
- \( K \) = item of questionnaire
- \( S_i \) = Variation mark of each item
- \( S_t \) = Variation mark of total items

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2.3 Student Questionnaire

The tool used in the present study for students was constructed by Malakul and others (1985: 218-225) and adapted by Chutamanee (1988) for the purpose of follow-up study of the implementation of the B.E.2521 lower secondary school curriculum in private schools, Bangkok Metropolis.

This questionnaire was specifically prepared for the grade eight students studying in the secondary school of the educational region-I in academic year 1992 in Thailand. The tool was validated on 10 students per school for different subjects both compulsory core subjects and free elective subjects in a field of teaching programme. This questionnaire consists of 5 parts as follows:

- Personal information
- Teaching and learning condition
- Suggestion for teaching and learning
- Validity of the tool
- Scoring procedure

2.3.1 Personal Information

This includes 8-items enquiring about position, class, academic achievement, course of subject, selection of learning programme, the highest qualification of study. The items were short answer and open-end type demanding answers in one or two sentences or tick marking the correct response.
2.3.2 Teaching and Learning Condition

The data regarding the curriculum implementation of the revised version of 1990 in secondary schools for perception of the student was collected by check-list of 28 items.

The respondents were expected to give a response on a 6 point scale viz: very much, much, moderate, little, very little and not at all.

The items covered the teaching and learning conditions which have been presented below:
1) Curriculum document like classroom environment, school facilities, textbooks, etc. (item 3).
2) Teaching and learning programme like students having an opportunity to choose a variety of courses for study, students can choose the plan of study according to their skill etc. (items 4).
3) Instruction and media like booklet, textbook, project-report, multi-media for instruction, teaching and learning activities etc. (items 7).
4) Activities of special teaching like extra-curriculum activities which are organized for students etc. (items 3).
5) Guidance service as it is provided for general problems etc. (items 3).
6) Remedial teaching for students to pass the examination etc. (items 3).

7) Evaluation through summative test helpful for students (items 2).

8) Supervision, arrangement and placement like knowledge of the teacher in particular subject, number of teachers and other human resource provided in school etc. (items 3).

2.3.3 Suggestion for Teaching and Learning

This part is in open question form for the students to suggest measures to improve teaching in the lower secondary school curriculum B.E. 2521 (Revised Version in 1990) which consists of 6 items fill in the blank type.

2.3.4 Validity of the Tool

The student questionnaire was constructed by Malakul and others (1985: 218-225) to evaluate the higher secondary school curriculum: Process of curriculum utilized. It was then improved again by Chutamanee (1988) for follow up study of the implementation of the B.E. 2521 lower secondary school curriculum in private school in Bangkok. The investigator adapted it on the basis of the opinion of the adviser and the expert in Srinakharinwirot University on the aspects of language, content coverage and process of
curriculum implementation. The tool was given to the experts from the department of education of Panjab University, Chandigarh, for their comments with regard to how the tool fulfils its purpose and their suggestions were duly incorporated in the tool.

The investigator tried out the questionnaire on the group of 20-students from Bangkok city. The values of the test retest reliability was found to be 0.91 which indicates that this tool is a reliable tool.

2.3.5 Scoring Procedure

A part of the tool consists of the bio-data and suggestions for teaching and learning on short answer and open ended questions. The part of teaching and learning condition comprised of 28 check-list type of items and are measured on 6-point scale.

The final draft of the tool has been given in the Appendix - A.

2.4 The School - Efficiency Scale

For the purpose of studying the impact of implementation of the curriculum on school efficiency - a tool for measuring school efficiency was extracted from the teachers and students questionnaire on the criteria of school efficiency. Bureau of Educational Technique, Ministry of Education, (1985) identified five dimensions of
school-efficiency as follows:

1) Building, location and material
2) Personnel administration
3) School administration
4) Teaching and learning activities
5) School and assembly of people

2.4 (A) Planning of the Tools

For the tool namely "Questionnaire for school efficiency", the 35 items which were considered relevant to the construct of school-efficiency were initially selected. After a review, a set of 27-items were finally accepted for the tool. The distribution of items across different dimensions of construct of the school-efficiency have been presented as follows:

1) Building, Location & Material
   School facilities like documents, textbook, playground, media etc. (items 5)

2) Personnel Administration
   Teaching and Learning Plan, guidance, home-room activities etc. (items 6)

3) School Administration
   Course of contents, extra-curricular activities, guidance service, supervision etc. (items 8)
4) Teaching & Learning Activities
Teaching and Learning in classroom, remedial teaching, evaluation etc. (items 5)

(5) School and Assembly of People
Extra-curricula activities outside school, job-information in school, special teaching etc. (items 3).

2.4 (B) Improvement of the Tool
The 27-items were retained, the language was further improved to make simple and straight to adapt the items to the new construct. The items were given to three experts to assess them if the items are adequate to measure the construct of the tool. The items were altered at a few places to suit to the demand of the tool.

2.4 (C) Validation of the Tool
The items of the tool used in the present tool were already validated by Chankawang (1981: 174-185) and Boonlon (1981: 151-177) in the part of teacher questionnaire and student questionnaire of Malakul and others (1985: 218-225) who made them to evaluate the higher secondary school curriculum: Process of curriculum implementation. It was then improved again by Chutamanee (1988) to follow up study of the implementation of the B.E. 2521 lower secondary school curriculum in private schools in Bangkok. The reliability of the tool was found to be 0.93 and 0.91 in the
part of teachers questionnaire and students questionnaire as calculated earlier and 0.92 in the part of the school efficiency as calculated on the current data.

2.4 (D) Scoring of the Tool

Each statement was followed by a 3-point scale viz: "Enough", "Not enough" and "Not any" in the part of building, location and material of school and asked to react on the 3-point scale viz; "Very much", "Moderate" and "Very little" upon each item in the part of personnel administration, school administration, teaching & learning activities and school assembly of people and weight them 2,1,0 and 3,2 and 1 respectively.