CHAPTER 1
INTRODUCTION

1.1 Outline of Study

In response to the request of the Government of the Union of Myanmar (GOM), the Government of Japan (GOJ) decided to conduct the Development Study for the Improvement of Quality and Access of Basic Education in the Union of Myanmar, abbreviated to the "Myanmar Basic Education Sector Study (MBESS)," in accordance with the relevant laws and regulations in force in Japan. Accordingly, the Japan International Cooperation Agency (JICA), the official agency responsible for the implementation of the technical cooperation of the GOJ, undertook the Study in close cooperation with the authorities of the GOM.

Following the original schedule, the Study started in March 2001 and was completed in September 2002. However, the GOM requested the GOJ to extend the Study as a technical support essential to help promote the educational reforms currently underway. The GOJ agreed to the extension and decided to extend the Study for another 17 months from November 2002 to March 2004.

1.2 Summary of Activities

1.2.1 MBESS in the Original Term

Study Objectives

The Study had four objectives:

1. To develop *Model Teacher's Guides* for "General Studies," "Basic Science" and "Social Studies" at the primary level, introducing the "activity-oriented" teaching methods,
2. To formulate a plan to upgrade the Education Colleges physically and academically, enabling them to effectively familiarize teachers with the "activity-oriented" teaching methods,
3. To develop a model plan to improve primary school buildings, and
4. To strengthen the planning and management capabilities of the Myanmar counterpart personnel.

Components

The Study consisted of three separate but closely interrelated components. They were:

Component A	Developing Teacher's Guides
Component B	Upgrading Education Colleges
Component C	Developing A Plan For Primary School Buildings

Component A developed the teacher's guides for three subjects (General Studies, Basic Science and Social Studies) to be taught at the primary level. More specifically, the target levels were as follows:

General Studies	Kindergarten, Grades 1 and 2
Basic Science	Grades 3 and 4
Social Studies	Grades 3 and 4

Due to time constraints, only a few selected topics from each subject were dealt with. The guides were developed in cooperation with staff from the Department of Education Planning and Training (DEPT), Ministry of Education, teacher educators from Yankin Education College (YEC) and Thingungyun Education College (TEC), and teachers from the Yankin Education College Practicing School (YECPS) and Basic Education Schools.

Component B dealt with all 19 Education Colleges. However, the development of an appropriate training curriculum and teaching methods for the three subjects were carried out together with teacher educators at Yankin Education College. The College provided opportunities for model or trial courses to be held in real classrooms. This component also looked into the situation of facilities and equipment at the Education Colleges to make recommendations for their physical improvement.

Component C covered four model townships, each representing one of the four climatic zones in the country. They were 1) delta zone, 2) coastal zone, 3) cool and hilly zone and 4) dry zone. All primary schools located in the four townships were studied to assess the physical conditions of the school buildings. In addition, this component monitored the Dala township grassroots grant project which was started by GOM with a grant from the Japanese Embassy after the completion of component C study.

Coverage

Component A conceptually covered all primary schools in Myanmar. However, one primary school was selected from the Yangon area as the pilot school where the Teacher's Guides developed by the Study were tested in real classrooms by teachers. The selected school was the Yankin Education College Practicing School (YECPS).

Component B dealt with assessing the existing conditions of all of the 19 Education Colleges throughout the country. The development of curriculum was carried out jointly with the teacher educators at Yankin Education College. Model classes were also held with participation of college students.

Component C selected the four townships below as the model townships. All primary schools in the model townships were studied.

Table 1-1 Selected Townships

Zone	Model Township	State/Division	No. of Primary Schools
Delta Zone	Dala	Yangon	24
Coastal Zone	Gwa	Rakhine	108
Cool and Hilly Zone	Theinni	Shan	42
Dry Zone	Myinmu	Sagaing	89
Total	--	--	263

Source: JICA Study Team

Outputs

Component A produced the following outputs:

Model "Teacher's Guide for General Studies"
Model "Teacher's Guide for Basic Science"
Model "Teacher's Guide for Social Studies"
Manual for Science Experiments
CCA demonstration video for General Studies
CCA demonstration video for Basic Science
CCA demonstration video for Social Studies

Component B produced the following outputs:

CCA handbook for Education Colleges
Reports on model lessons
Reports on block teaching

Component C produced the following outputs:

Manual for improvement planning for primary school buildings
Monitoring report on the Dala township grassroots grant project

Phasing

MBESS was implemented in three phases. The phases had the following main activities:

Phase 1	March 2001 - September 2001
Component A	Situation analysis
Component B	Situation analysis
Component C	School survey, prioritization, zone-specific standard design and cost estimation
Phase 2	October 2001 - March 2002
Component A	Pilot lessons for selected topics Child-Centered Approach Workshops
Component B	Pilot classes/training sessions
Component C	Manual for improvement planning for primary school buildings
Phase 3	April 2002 - September 2002
Component A	Development of model teacher's guides
Component B	Development of textbooks

Component C Monitoring report on the Dala township grassroots grant project

1.2.2 MBESS in the Extended Term

Based on the new agreement between GOM and JICA, the extended study will focus mainly on Component A. During this extended study, the JICA Study Team will review the model teacher's guides which were produced in the prior study and complete them covering all topics.

Objectives of the Extended Study

The objectives of the Study during the extended period are:

1. To complete the teacher's guides, which aim to promote teaching methods based on the "Child-Centered Approach (CCA)" in the primary curriculum, particularly regarding the newly introduced "Basic Science," "Social Studies" and "General Studies",
2. To support establishing an institutional framework which aims to spread the CCA across the country,
3. To help Myanmar counterpart personnel strengthen the capability of planning and implementing CCA lessons, and
4. To evaluate the effectiveness of CCA on Myanmar's primary education sector.

Scope of the Extended Study

The extended study will be carried out in two phases over the period of about 17 months as follows:

Phase 3 (Extended period)	November 2002 - March 2003
Phase 4	April 2003 - March 2004

Four Main Activities of the Extended Study

The JICA Study Team will implement four important activities during the extended study period: (1) Completion of Teacher's Guides, (2) CCA workshops, (3) Capacity building for the counterparts, and (4) Evaluation of CCA's effectiveness on the primary education sector. These activities will be conducted as follows:

Activity 1: Completion of teacher's guides

The JICA Study Team will take the following steps to complete the teacher's guides.

1. Review of the textbooks in the working group meetings
2. Creation of pilot lesson plans
3. Preparation for pilot lessons
4. Implementation of pilot lessons

5. Evaluation of pilot lessons
6. CCA workshops
7. Completion of teacher's guides

Activity 2: CCA workshops

There are two main objectives of CCA workshops: (1) To examine whether the lesson plans are appropriate in rural environments; and (2) To support establishing an institutional framework which aims to spread CCA across the country. In order to achieve the latter objective, the JICA Study Team will use the following special strategy.

1. The JICA Study Team gives the working group the responsibility for planning, implementing and evaluating CCA workshops step by step. The Study Team expects that by the end of the Study the working group will be able to take the initiative of holding workshops by itself:

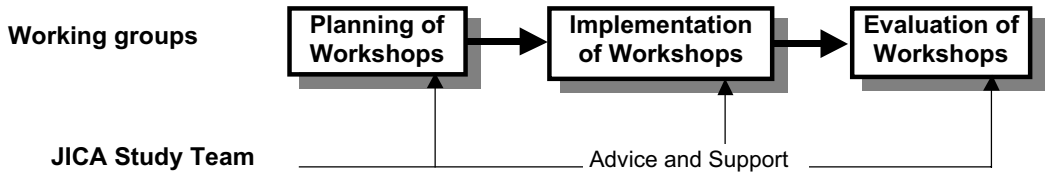


Figure 1-1 Technical Transfer to Working Groups

2. CCA workshop will be held mainly at Education Colleges. It will be also held in cooperation with the township education offices in the areas where there is no Education College, such as Chin and Kayah states. The Education Colleges are grouped in several clusters based on their geographical locations. Each cluster designates some staff as CCA resource persons. The area where there is no Education College also designates some people as CCA resource persons. These people will be invited to Yangon to join JICA activities like workshops, seminars, and daily meetings of the working groups. The clusters headed by the CCA resource persons will be the center for disseminating CCA.

Activity 3: Capacity building for the counterparts

The JICA Study Team will build up the capacity of the counterparts (especially working group members), with regard to knowledge of CCA, techniques for CCA implementation, and management skills in workshops and seminars. The Study Team will have intensive training through the working group meetings to transfer as much knowledge and skills as possible to the counterparts. The Study Team will evaluate the result of the capacity building from the following points of view.

1. Knowledge of CCA and skills in CCA implementation
2. Management skills in CCA workshops

Activity 4: Evaluation of CCA's effectiveness on Myanmar's primary education

This evaluation is highly important to identify the effectiveness of CCA on Myanmar's primary education. The JICA Study Team will conduct this evaluation in cooperation with the YECPS.

Organization

On the Japanese side, JICA is the agency responsible for the implementation of the Study. The counterpart agency on the Myanmar side is the Department of Education Planning and Training (DEPT), Ministry of Education (MOE). In support of DEPT, Department of Basic Education No.1 to 3 of MOE will also be actively involved during the Study in order to make the Study relevant to day-to-day administration of basic education in Myanmar.

The Study will be jointly carried out by the Myanmar counterpart team and the JICA Study Team. The Myanmar counterpart team consists of concerned officials of MOE, teacher educators at the Yankin Education College and Thingunyun Education College, and teachers at Yankin Education College Practicing School, which will remain the pilot school as in the prior Study period. The JICA Study Team, on the other hand, has reorganized itself with new members and is now composed of consultants whose names and assigned tasks are described in **Table 1-3**. The International Development Center of Japan (IDCJ) continues to be the prime contractor to JICA to carry out the Study.

To guide and coordinate implementation of the Study, the Steering Committee will play an important role on the Myanmar side. According to the Minutes of Meeting (November 2000), the Committee members are as listed in **Table 1-2**.

The JICA Advisory Committee will continue to take responsibility to supervise and advise the JICA Study Team on the Japanese side.

To implement daily activities effectively, the working groups will be strengthened with some full time Myanmar personnel. In addition, the working groups can recruit new members if necessary.

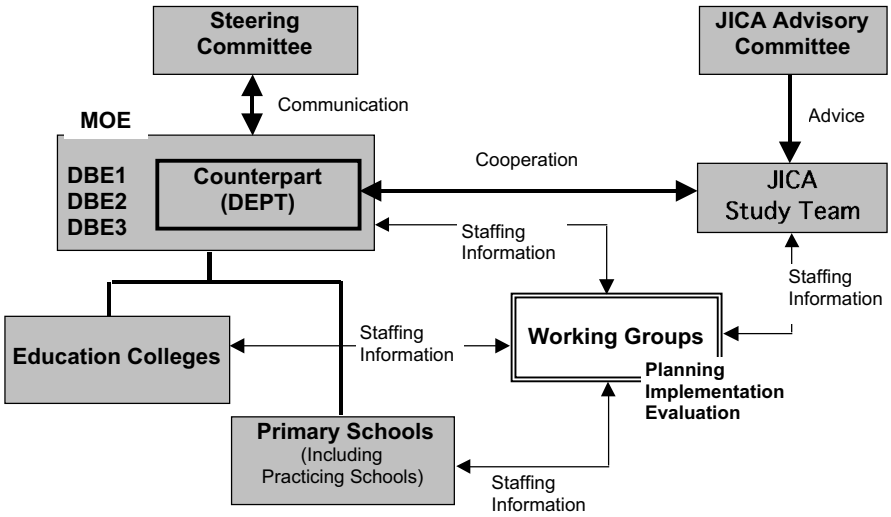


Figure 1-2 Organization Structure for the Study Implementation

Table 1-2 Steering Committee Members

Chairman	Director General, Department of Educational Planning and Training (DEPT)
Vice Chairman	Director General, Department of Basic Education No.1 (DBE1)
Member	Director General, Department of Basic Education No.2 (DBE2)
Member	Director General, Department of Basic Education No.3 (DBE3)
Member	Principal, Yankin Education College (YEC)
Secretary	Deputy Director General, Department of Educational Planning and Training (DEPT)
Joint Secretary	Director, Department of Educational Planning and Training (DEPT)

Table 1-3 Members of JICA Study Team

Name	Affiliation	Assignment
Dr. Norimichi TOYOMANE	IDCJ	Team Leader
Ms. Mutsumi TSUBOUCHI	IDCJ (IC Net)	Basic Science 1
Mr. Ichiro MIYAZAWA	IDCJ	Basic Science 2
Mr. Yoshitaka TANAKA	IDCJ	Social Studies 1
Ms. Sawa HOSOKAWA	IDCJ	Social Studies 2
Mr. Shinji TAJIMA	IDCJ (ICLC)	General Studies 1
Dr. Taeko KUROKAWA	IDCJ	General Studies 2
Ms. Yoko KASAI	IDCJ	Project Administration

Abbreviation: IDCJ: International Development Center of Japan
IC Net: IC Net Limited
ICLC: International Center for Literacy and Culture

CHAPTER 2
BASIC EDUCATIONAL THEORY

2.1 Major Educational Philosophies

Philosophy is the center of education. It provides a framework for education including values, goals, contents, ways of thinking, roles of schools and teachers, etc. Without philosophy, education cannot be conducted. Historically there has been several educational philosophies, each of which provides different value of education and ways of teaching and learning.

Perennialism

Since the 16th century, perennialism had been the main educational philosophy and dominated the educational world up to the late the 19th century. It is the oldest and the most conservative educational philosophy. Perennialism views knowledge and values as unchangeable and permanent, and also considers that knowledge is universal. Therefore, perennialism values memorizing past knowledge, which was asserted by past intellectuals, and pays more attention to the amount of knowledge. Under this educational philosophy, the goal of education is to educate the rational person and to cultivate the intellect through the teacher providing children with various knowledge. The teacher's role in the perennialism is to help children think rationally, based on oral exposition and explicit teaching of traditional values. The rote-learning and lecture style of teaching with a large number of children in a classroom are commonly observed.

Progressivism

In 1920s, many educators and scholars recognized the dysfunction of education during that period and started to protest against the perennialist thinking. They stressed that the reality of the world including knowledge and values was constantly changing and did not stay in the same form, so that memorization of the fixed body of knowledge is useless. This statement completely denied the perennialism philosophy. The progressive philosophy gradually became popular and was supported by many people. This popularity caused a contemporary reform movement in education and society in the United States of America in the beginning of the 20th century.

The characteristic of progressivism is, instead of memorization, to stress that the skills and tools of learning including problem-solving methods and scientific inquiry are significantly important for children to live in the changing world. In addition, progressivism pays much attention to children. Children's interests and feelings are the center of education, instead of past knowledge and value. The term of "child-centered education" appeared at this time in line with the wide acceptance of the progressivism philosophy. The aim of education in progressivism is to promote good social living. Under this educational philosophy, the role of teachers is, unlike authority or power, to guide children in their problem-solving and scientific projects.

Essentialism

Essentialism also takes a traditional and conservative position on education similar to that of perennialism. However, this educational philosophy is not rooted in the same idea as perennialism. Although perennialism views knowledge as unchangeable and universal, essentialism does not think about it and pays great attention to modern knowledge and technology.

Essentialism appeared to react against progressivism in the United States of America in the 1930s and developed into the major position during the 1950s and 1960s. The essentialist stressed that education should provide children with essential academic knowledge and necessary skills. They considered reading, writing, and calculation for primary level of education, and English, mathematics, science, history and foreign language for secondary level of education to be important. In essentialism, mastery of concepts and principles of subject matters are strongly focused on. The aim of education is to promote intellectual growth of the individual. Teachers are considered the authority in their subject field.

Reconstructionism

With the popularity of progressivism, another movement occurred in the field of educational philosophy in the 1950s as a reaction to the progressivism. Although this movement was small, it is characteristic to bring a different view to the educational philosophy, which is the necessity of society-centered education.

In this philosophy, skills and subjects are important to identify and improve problems of society. Learning should be concerned with contemporary and future society. The aim of education is, therefore, to improve and reconstruct society. Teachers serve as an agent of change and reform, act as a project director and research leader, and help children become aware of problems confronting human beings.

Table 2-1 Overview of Major Educational Philosophies

Educational Philosophy	Aim of Education	Knowledge	Role of Education	Curriculum Focus
Perennialism	To educate the rational person; to cultivate the intellect	Focus on past and permanent studies; mastery of facts and timeless knowledge	Teacher helps students think rationally; based on Socratic method, oral exposition; explicit teaching of traditional values	Classical subjects; literary analysis; constant curriculum
Essentialism	To promote the intellectual growth of the individual; to educate the competent person	Essential skills and academic subjects; mastery of concepts and principles of subject matter	Teacher is authority in his or her subject field; explicit teaching of traditional values	Essential skills (three Rs) and essential subjects (English, science, history, math, and foreign language)

Progressivism	To promote good social living	Knowledge leads to growth and development; a living-learning process; focus on active and relevant learning	Teacher is guide for problem solving and scientific inquiry	Based on student's interests; involves the application of human problems and affairs; interdisciplinary subject matter; activities and projects
Reconstructionism	To improve and reconstruct society; education for change and social reform	Skills and subject needed to identify and ameliorate problems of society; learning is active and concerned with contemporary and future society	Teacher serves as an agent of change and reform; acts as a project director and research leader; helps students become aware of problems confronting humankind	Emphasis on social science and social research methods; examination of social and economic problems; focus on present and future trends as well as on national and international issues

Source: Ornstein, A.C. and Hunkins, F.P., "Curriculum, Foundations, Principles, and Issues, (3rd edition)," Allyn and Bacon, p56.

2.2 Contribution of Psychology to the Field of Education

Psychology has played a vital role in educational development. It provides a basis for understanding the teaching and learning process. Without knowledge of psychology, education cannot be effectively conducted, especially education at the primary level. In the modern era, the rapid development of psychology as an academic field has influenced contemporary education. There are three main psychological theories of leaning: behaviorist theory, cognitive development theory, and humanistic theory.

Behaviorist theory

The behaviorist theory is the oldest and most traditional psychological theory, which is rooted in the ideas of Aristotle, Descartes, Locke and Rousseau. It has dominated most of the 20th century and even now still maintains popularity in the field of psychology. It emphasizes conditioning behavior and altering the environment to elicit selected responses from the learner.

The basic learning concept of this psychology is "learning by doing" and that "outcome of the learning is observable and measurable." Based on this basic concept, the behaviorist states that reinforcement is essential for learning to occur, learning proceeds from simple to complex and part to whole behavior, learning should proceed in small, step by step, simple units, and leaning is hierarchical, based on sequential readiness.

The major psychologists taking this position are Thorndike, Tyler, Taba, Bruner, Pavlov, Watson, Skinner, Bandura, Gange, etc.

Cognitive development theory

This theory is represented mainly by the idea of J. Piaget, the Swiss psychologist. Nowadays most psychologists agree that human growth and development should be concerned from the points of cognitive, social, psychological and physical views. In addition, they admit that learning in school is mainly cognitive in nature. The advocates of this psychological theory have the same ideas. However, these theorists are more concerned with the developmental aspect of human learning and the way in which content is structured for learning.

The cognitive development theory stresses that cognitive stages of development are related to age, and is sequential and based on previous growth. The basic concept of learning in this theory is that learning can be modified as a result of the interaction of the self with the environment, that learning involves the assimilation of new experiences with prior experiences, and that learning is best achieved through active participation in the environment. Based on this basic concept, these theorist think that children learn best when they can generalize information, that is, whole to part learning, and that children who learn how to learn will learn more in school than those who are dependent on the teacher to learn.

The advocates of the cognitive development theory are Piaget, Guilford, Gardner, Dewey, Bruner, Phenix, etc.

Humanistic theory

Although traditional psychologists do not recognize humanistic theory, this is now an important part of psychological theory. This theory is also called phenomenology, which emphasizes the total organism or person, unlike the other theories concerned about only cognitive domain. Humanistic theory focuses on individual awareness such as feelings and attitude (affective domain) as well as cognitive domain.

The advocates of the humanistic theory stress that learners are viewed as individuals with diverse needs, abilities and aptitudes, that the learner's self-concept and self-esteem are considered as essential factors in learning, that learning is considered holistic and the act of learning involves emotions, feelings, and motor-dependent skills, that learning is based on warm, friendly, and good student-teacher interactions, and that learning is based on life experiences, discovery, exploring, and experimenting. Based on this basic learning concept, humanist expects that children share ideas, work together, and tutor and help each other, and academic tracking, competitive testing or programs are minimized, and that children are given choices with a certain extent of limitation and freedom with responsibilities.

The humanistic theory is supported by Maslow, Rogers, Raths etc.

2.3 Appearance of Various Educational Approaches

Educational philosophy with psychology has established various educational approaches such as behavioral approach, managerial approach, the systems approach, academic approach, and

humanistic approach. These are usually divided into two groups: the technical-scientific approach and the nontechnical-nonscientific approach[1]. The former four approaches are included into the technical-scientific approach and the last one is the nontechnical-nonscientific approach.

Behavioral approach

This approach has long been a dominant approach in the field of education during the 20th century. Because it has been developed well logically and prescriptively, it is easily understandable for educators and teachers. For example, the behavioral approach sets up a clear framework of learning strategy including specified goals and objectives, sequenced content and activities, and the specific outcomes corresponding to the goals and objectives. The outcomes of lessons are also assessed by checking the goals and objectives.

The behavioral approach originally came from the ideas of Frederick Tayler, who researched a factory's pursuit of efficiency and innovated the scientific management theory. According to Taylor, it is important to minimize cost and maximize outputs. This theory was applied to education. It is effective for school management to increase the number of children in one class, to raise a teacher-students ratio, to decrease the number of school administrators, and to use ready-made educational materials. The behavioral approach emphasizes that learning outcomes should be visible and measurable, and that objectives should be written by using "action verbs," such as "describe," "explain," "act," etc. These actions can be seen clearly and the learning outcomes are easily evaluated based on the objectives with using action verbs. The specific model of teaching practice based on the behavioral approach is shown below. This model, which was produced by M. J. Dunkin and B. J. Biddle and is called the "*process-product research*" and includes typical characteristics of behavioral science. According to this model, teaching in a classroom (shown with black box in the figure) is decided by the presage and context variables and outcome of teaching (shown as the product variables in the figure) is produced through children's behavioral changes.

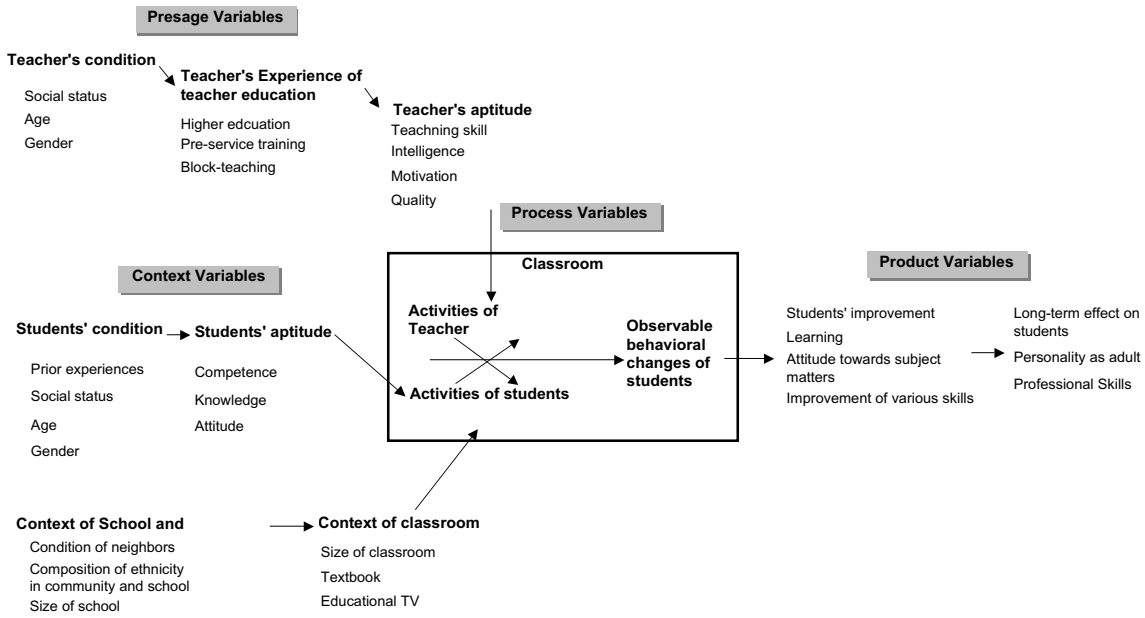
Opponents have criticized that the behavioral approach emphasized too much on visible and measurable aspects of human actions, which covers only a part of all human actions. They have sometimes scoffed at it calling it the "machine theory." Shulman, one of the opponents of the behavioral approach, pointed out that the "process-product research" lacks 3Cs: content, cognitive and context. In the teaching practice based on the behavioral approach represented by the "process-product research," teaching contents (what to teach) are not carefully concerned, children's cognitive and thinking process (how to think and solve) are less focused, and the social context of classroom is totally ignored with only teaching materials (including textbooks and teaching aids) and teaching technology considered as the important factors of education.

There are few pure behaviorists at the present time. Behavioral research has been highly developed during the last few decades and now addresses human complexity and depth of the

[1] The nontechnical-nonscientific approach does not have a negative meaning, but means that it is concerned more about invisible and immeasurable human aspects.

human mind. Therefore, some changes have occurred in the behavioral approach. Today, the behaviorists do not stick to the traditional ways of thinking and have become more concerned about human beings within a social context.

The famous advocates of the behavioral approach are Bobitt, Charters, Tyler and Taba.



Source: Dunkin, M. J. and Biddle, B.J. "The Study of Teaching," 1974, Rinehart & Winston

Figure 2-1 Behavioral Model of Teaching Practice

Humanistic approach

In spite of the great popularity of the behavioral approach among many educators and scholars at the beginning of the 20th century, a few educators questioned the view of the behaviorists. They criticized that the behavioral approach was too scientific and too rigid, it ignored personal and social aspects, and it did not pay attention to artistic, physical and cultural aspects of subject matter. The humanists have stressed that a human being is more complicated than what the behaviorists thought, and the need of children for self-reflectiveness and self-actualization should be concerned in education. In addition, the humanists have emphasized sociopsychological dynamics of classrooms and schools to conduct effective educational practices.

The humanistic approach became popular during 1940s and 1950s in line with the development of child-psychology and human psychology which first appeared in 1920s. Many educators such as Dewey, Judd, Parker and Kilpatrick established new schools, especially primary schools, to implement their ideas of education under the humanistic approach. The terminology of "child-centered education" appeared from these various practices. Through the trials of the "child-centered education" in these schools, many learning activities for children were newly

created such as group games, group projects, dramatization, field trips, social enterprises, etc. These activities were conducted in cooperation with communities and parents of the children.

However, this approach has also been strongly criticized by many educators, who condemned that the humanists paid much attention to children's interests and did not concern carefully about academic contents and academic improvement of children. Opponents of humanists have also stressed that students at the secondary level required a good base in academic core subjects and that the humanistic approach was a useful only to a certain extent for children at primary level. This statement is rational and should be taken into consideration carefully by the humanists. Indeed, the humanistic approach once lost its popularity in the field of education. However, it is again gaining more adherents as people realize the interdependence of cognition and affect, which are emphasized highly by the humanists. To think about human nature and to conduct education for human beings are two important views of education given to us by the humanistic approach.

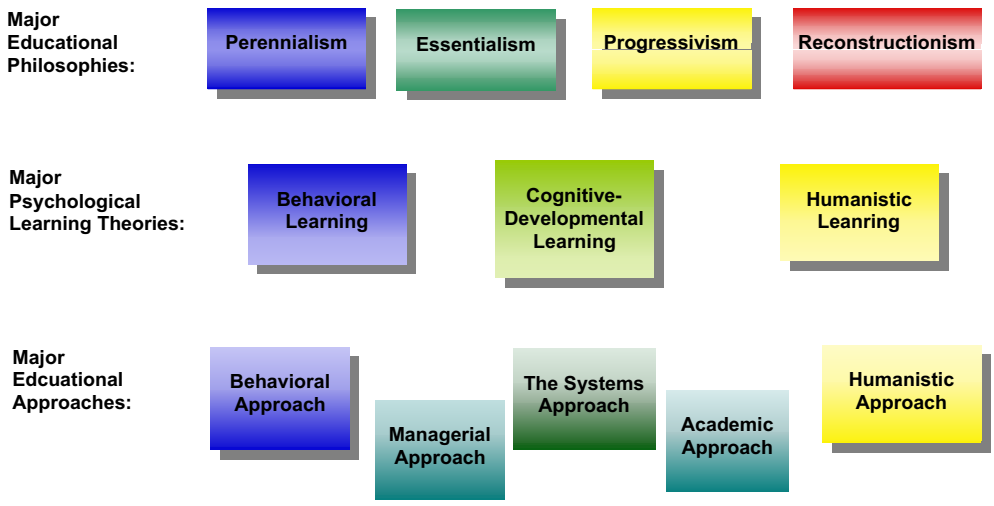


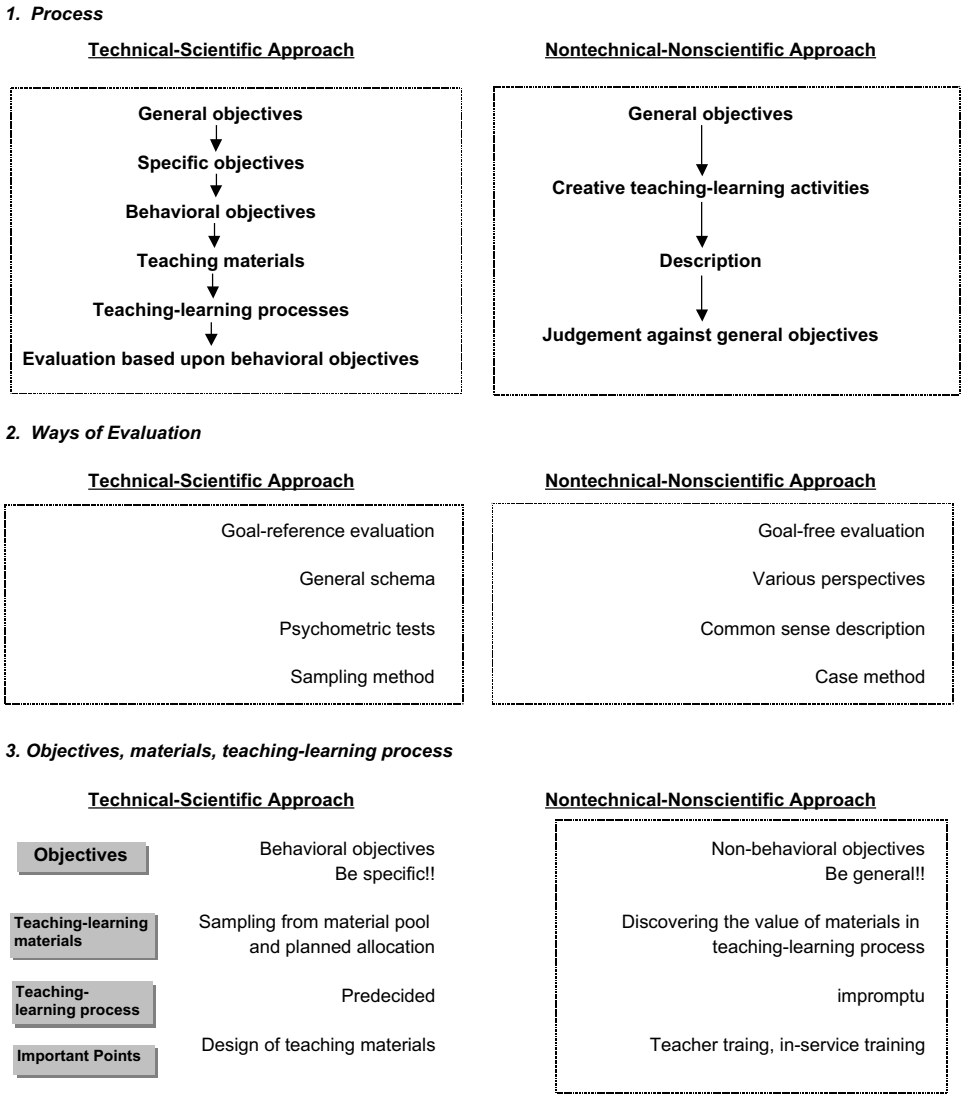
Figure 2-2 Various Educational Positions (Philosophy, Psychology and Approach)

2.4 Major Models of Curriculum Development

Technical-scientific and nontechnical-nonscientific approaches

When developing curriculum based on the educational theory mentioned above, we can refer to two major models: technical-scientific approach and nontechnical-nonscientific approach. The technical-scientific approach including behavioral, managerial, the systems, and academic approaches is based on the behavioral psychological science. In this approach, education is explained as the relation between stimulus and response (S-R) and assessment focuses only on behavioral changes of children. Atkin, a professor of Illinois University, U.S., has strongly criticized this technical-scientific approach. According to him, as long as the technical-scientific approach is dominant, only observable outcomes of learning are emphasized on as the results of education, and that invisible outcomes will be completely ignored. He presented the

idea of the nontechnical-nonscientific approach for the first time in the "International Seminar on Curriculum Development" held in Tokyo in 1974[2]. Unlike the technical-scientific approach which takes highly analytical view of curriculum, the nontechnical-nonscientific approach has relative and holistic point of view of curriculum. The differences between two approaches are shown below.



Source: Ministry of Education, "The issues of curriculum development," Department of printing, Ministry of Finance, 1975.

Figure 2-3 Comparison of Technical-Scientific and Nontechnical-Nonscientific Approaches

[2] This International Seminar was organized by OECD and the Government of Japan. Atkin presented the nontechnical-nonscientific approach at this seminar. His idea of this has been created based on the then-Japanese educational system, with support from a Japanese educator. Therefore, the non-technical-nonscientific approach is also widely called "***rashomon approach.***" The ***rashomon*** is a title of the Japanese novel written by Ryunosuke Akutagawa, a famous writer.

In the technical-scientific approach, the most important part of the teaching process is behavioral objectives. All teaching activities are implemented aiming to achieve the behavioral objectives, and children's performance is assessed based on these objectives. Therefore, the behavioral objectives need to be stated in the form of describing children's behavioral changes as specific as possible. Another important characteristic of the technical-scientific approach is that it is based on a strong idea that every teacher can conduct good lessons as long as he/she gives children good stimulus and rigidly follows the process of this approach. Good stimulus here means good teaching materials. According to the behaviorist theory, responses depend upon types of stimulus, and in the process of teaching practice, children's behavioral changes (responses) depend upon what kinds of teaching materials are shown (stimulus). Therefore, many teachers who support this approach tend to focus their best efforts on developing teaching materials.

On the other hand, nontechnical-nonscientific approach puts much stress on the creative teaching-learning activities. In this approach, teachers are always looking for the most effective way to prepare and teach lessons in order that children deepen their level of understanding and strengthen their thinking and analytical skills. Unlike rigid and fixed process of teaching of the technical-scientific approach, the nontechnical-nonscientific approach requires flexibility of the teaching process. Teachers need to deal with children's various ideas and opinions during lessons. Unexpected situations can always happens during lessons. The main purpose of the nontechnical-nonscientific approach is not to provide children with new knowledge following the ready-made plan of the teaching process, but to improve and strengthen children's problem-solving skills with using creative teaching ways. Therefore, teachers should be more concerned about what children are thinking and what questions they have. Teachers should be flexible and willing change their way of teaching based on the classroom situation. Therefore, the most important is teacher's qualifications and abilities to deal with effectively with children's changing situations. This is the reason why this approach puts much more stress on teacher's training, especially in-service training.

Goal-reference (intended outcomes) and goal-free evaluations

When comparing the technical-scientific approach and the nontechnical-nonscientific approach, the differences between the two become clearer. Among the various differences, it is worth to discuss the difference of the evaluation system as it is an important part for these two approaches. The technical-scientific approach uses ***goal-reference evaluation***, and the nontechnical-nonscientific approach uses ***goal-free evaluation***. These two evaluation measures are based on different philosophy of curriculum.

The goal-reference evaluation means that evaluation should be done based on intended objectives. Because curriculum is a series of intended learning outcomes, evaluation should clarify how much learners achieved through their learning. This seems logical, especially if evaluation is considered purposeful behavior meant to determine the worth of the curriculum or whether the curriculum allowed children to attain the objectives stated. On the other hand,

some educators such as M. Scriven[3] have for many years been advocating the goal-free evaluation. They argue that people sometimes wish to engage in evaluation just to examine the effects of an educational innovation and to judge the quality of the effects produced. The goal-free evaluation focuses more on what results will occur through the teaching process. In this view of evaluation, teachers do not confine their energy to the stated objectives, but instead gather data and information as much as possible to analyze the effects of the new teaching practices. During analysis of the teaching practices, both stated objectives and unexpected effects are examined unconsciously. Therefore, teachers can have a much wider view of evaluating teaching practices by employing the goal-free evaluation.

[3] M. Scriven has produced remarkable achievements in the field of educational evaluation. He laid stress on the importance of classifying and effectively using "diagnosis evaluation," "formative evaluation" and "summative evaluation."

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CHAPTER 3
CONCEPT OF CHILD-CENTERED APPROACH (CCA)

3.1 Concept of Child-Centered Approach (CCA)

The present rapid social changes have brought further complexity in knowledge, information and technology that teachers and children have to deal with. In this situation, there is a need to effectively attract the attention and interest of children in school education through transforming the conventional teacher-oriented approach into the child-centered approach (CCA).

Myanmar's conventional teacher-oriented approach, whose activity is mainly rote memorization, does not provide children with the capacity to understand the complex content of various fields of study and techniques necessary for everyday life. In addition, it cannot improve children's thinking ability nor contribute to solving problems around them. It can provide children only a large amount of knowledge without any chances to think deeply about it.

Rather than attempting to pass on to children knowledge through the teacher-to-children-one-way process, CCA recognizes the rich receptivity in children and seeks to build upon it through concrete experience, with the joy and excitement of experimental knowledge. CCA is based on the idea that children originally have inborn rich sensitivities and limitless talents and capabilities.

To facilitate the CCA process, teachers need to prepare effective educational materials with attractive and easily understandable practice and to bring enthusiasm and creativity to the classroom. As CCA draws upon children's interests that naturally stimulate children to learn, teachers are required to clearly understand its concept, utilization and effectiveness. Furthermore, teachers must be knowledgeable of child psychology including a child's desire, willingness, interests and feelings. Teachers must understand children as broadly and deeply as possible. Therefore, it is significantly necessary for teachers to build a strong relationship with parents and the communities where children live, and to look carefully into various issues faced by children.

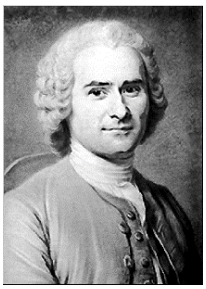
3.2 Historical Background of CCA

Historically child-centered education[1] first became popular in the U.S. between the 1890s and 1920s as one of the key concepts of progressive education. In that time, people in the U.S. had started to realize various dysfunctions in society such as the severe economic depression, an increasing gap between rich and poor, indifference to education, etc. People strongly insisted on reforms of the social system. They organized the new social movement called progressivism. Under this movement, a new educational thought was created as a part of the social reform. This was called progressive education. Progressive education embraced

[1] Instead of the "child-centered approach," the term of the "child-centered education" is used here because people in U.S. at that time called the new educational philosophy "child-centered education." The term of "child-centered approach" gives narrower meaning which indicates only the teaching technique.

various factors to improve certain dysfunctions in society: industrial training, agricultural education, social education and new techniques of instruction. This new educational thought was being promulgated widely among people supported social reforms.

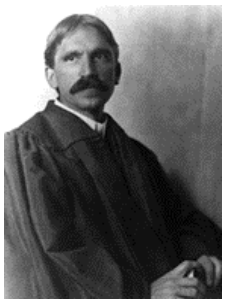
One of the key concepts of progressive education was the "child-centered philosophy," which strongly criticized the traditional thought of children as being immature human beings severely lacking in capabilities for thinking, acting, and creating. The child-centered philosophy is to respect children's creativity and self-expression at maximum. All children have a desire to express themselves by nature. For example, when a baby is crying, he is expressing something through this action. In the child-centered philosophy, not only does a child copy the action of adults and learn something passively, but also he learns new things through various positive actions such as investigation and trial. Back in the 18th century, this idea was already seen in the "Emile ou de l'education" written by Jean-Jacques Rousseau (1712-1778, French). Then, Johann Heinrich Pestalozzi (1746-1827, Swiss) and Friedrich Froebel (1782-1852, German) also stressed children's nature and their self-development. Ellen Key (1846-1926, Swedish) also agreed about children's nature in her publication the "Century of Children." Therefore, it can be considered that progressive education is rooted in their philosophy which began in the 18th century. However, the terminology of "child-centered" was not used yet at that time.



J. J. Rousseau

J. H. Pestalozzi

E. Key



J. Dewey

The educators who first used the terminology "child-centered" were F.W. Parker (American) and J. Dewey (1859-1952, American). They made great efforts and put their new ideas into practice in real educational situations. Parker established a prominent experimental school in Chicago (1883) to implement new types of lessons based on his educational philosophy. Dewey also established a "laboratory school" in Chicago and developed the child-centered method in which child groups worked on a project of their own interests (1896-1904). In his laboratory school, for example, children were provided cotton or wool and they tried to weave clothes by themselves. The children also experienced living in a cave for a while, found something new, and innovated something useful for such a life style.

Following Parker and Dewey, various other efforts based on child-centered education appeared. The Gray plan (1908-15) in Indiana, U.S., the Delton plan (1919) in Massachusetts, the Winnetka plan (1919) in Illinois are all examples of good practices for child-centered education.

Therefore, child-centered education is not only an educational approach and method, but it is more like an educational philosophy based on progressivism appearing in the beginning of the 20th century in U.S. To implement real child-centered education, it is vital that educational philosophy as well as educational approach and method is child-centered. It is impossible to use the child-centered philosophy only as an approach or a method under the different educational philosophy.

3.3 Major Learning Methods Based on CCA

In the progressive education movement, various educators such as Parker, Dewey, Kilpatrick and Washburne have practiced their new ideas of education. Based on the child-centered philosophy, many different methods were created and were tried out at the primary level of education, for example, in Parker's school, Chicago, in Dewey's lab school at University of Chicago, in Kilpatrick's Lincoln School of Teacher's College, and in Washburne's school district in Illinois.

Among those methods, the **problem-solving learning method** based on the educational theory of Dewey, is the most prominent method of progressive education. This learning method stresses children's positive attitude toward solving problems. A teacher provides children with an assignment which deals with some problems surrounding them in their daily lives. Children think about solutions to these problems by themselves and examine whether their solution is effective. The problem-solving learning process is usually divided into five steps: (1) Becoming aware of a difficulty or a felt difficulty (confusion and embarrassment), (2) Identifying the problem (investigation), (3) Assembling and classifying data and formulating hypotheses, (4) Accepting or rejecting the tentative hypotheses, and (5) Formulating conclusions and evaluating them. Through this learning process, children could end up gaining the ability to survive in real society.

The **project method**, developed by Kilpatrick (1871-1965, American), is also based on the philosophy of progressive education. According to Kilpatrick, children have to search and compare something, think why that happens, and make their own decisions at the end. The project method proposes creating various activities and letting children tackle them actively. Through this process, children face problems, try to solve the problems using prior knowledge, and find solutions. A teacher could serve as a guide, but not as the source of information or dispenser of knowledge. Although this method seems to be similar to the problem-solving learning method, the significant difference, according to Kilpatrick, is that the doctrine of the project method has "social purpose," whereas the problem-solving learning method has only a "child purpose."

The **inquiry-discovery learning method** is also related to the philosophical concept of child-centered education. This was developed by Bruner (1915- , American) in 1960s. In this method, children are deeply involved in the process to find results not only learn the results. For example, children find a relation between "A" and "B." Then children think whether there

is the same rule between "C" and "D." In addition, children apply this rule to "E" and "F." Through this learning process, children find some regulations among "A," "B," "C," "D," "E," and "F." Discovery learning has the following four objectives: (1) To develop children's capability for and attitude toward finding a problem, (2) To change from outer motivation to inner motivation, (3) To learn how to find, how to learn, and how to arrange, and (4) To develop the capability for solving problems.

These learning methods have quickly spread across the world during the past few decades. Today these methods are widely accepted and highly supported by most educators. This is because these methods have been created by carefully concerning the interdependence of cognition and affect which is now considered significantly important for education. All the methods above involve various interesting activities such as observation, interviewing, group discussion, group projects, field trip, excursion, games, and role-playing. Each of these has a different impact on children's learning processes. Therefore, implementers or teachers should spend a lot of time to prepare these activities carefully selecting the most effective ones in their lessons.

3.4 CCA and Japan's Experiences

Japan's modern education has started from the end of 1800s, when the Ministry of Education was first established (1871) and issued the first education law (1872). This modernization of education made a great impact on Japanese society. For example, children's enrollment rate increased rapidly and the illiteracy rate has been significantly decreased. The educational modernization at that time was highly influenced by European and American philosophy of education, especially American pragmatism and the centralized public school system of France. The main characteristic of education at this time was that a curriculum should be designed to deal with social needs and should be scientific and practical. This idea, influenced by the educational philosophy of Herbert Spencer (England, 1820-1903), strongly criticized the traditional way of educational thought which emphasized past knowledge. This first modern education introduced in Japan may not have had a view of children yet, but the view of combining social needs with education was completely new and the starting point towards a child-centered education.

In 1880, however, the ideas of strong nationalism and the Confucianism became powerful under Japanese imperialism. These ideas affected the field of education severely. All the schools focused on rote-learning again and strongly rejected ideas of modern education. The national curriculum was introduced with a single national textbook published by the imperial government. The textbook had absolute authority and all teachers must have followed them strictly to teach. Although many modern educators and scholars criticized this new system, modern education nevertheless disappeared in Japan.

In the beginning of the 20th century, the idea of child-centered education appeared in Japan and gained popularity quickly among many educators. These educators realized that education

under imperialism caused social stagnation and did not contribute to the improvement of the society. The education strongly controlled and limited by the government had deprived people of motivation to learn and creativity. To overcome the situation was to education. Influenced by American progressivism led by Dewey, many progressive Japanese educators established their own private schools to implement child-centered education separating themselves from national schools which were still at the center of traditional education. In these new schools, teachers respected children's personality and self-esteem and encouraged them to improve their attitudes towards self-accomplishment and self-study. Some educators tried to integrate some subject matters into one and conducted holistic education based on children's experiences and daily lives.

After World War II, Japan underwent a major turning point in education. The traditional education and philosophy were totally abolished, and a new style of education was created based on the instructions by the U.S. In 1947, the course of study was issued for the first time in Japan. The course of study clearly mentioned that education should be conducted with carefully concerning children's experiences and that all teaching materials including textbooks should be prepared in this respect. Educators must consider children's interests and their prior knowledge in order to conduct this new education. This idea was directly related to the educational philosophy of progressivism, which was led by Dewey and gained its popularity during 1950s in the U.S.

It was expected that the child-centered education would spread nationwide and would improve the stagnant Japanese education. However, Japanese society was not mature enough and not capable of understanding the new education. Unfortunately few Japanese educators understood the concept of child-centered education. As a result, many Japanese educators did not focus on whether the content of education was suitable for children and whether it related to children's daily experiences. They paid attention only to educational methodology, such as how to teach. At that time, educational principle (child-centered education) was, consciously or unconsciously, separated from educational objectives and content.

At the end of the 1950s, some criticism of the child-centered education appeared. Following the rapid changes of the world system during that time, it was considered that academic and scientific knowledge was more important than children's daily experiences and the schools were responsible to teach such knowledge systematically. In the "course of study" issued in 1958, it was clearly stressed that students had to strengthen basic competency of subject matter and scientific and technological knowledge. This idea has dominated Japanese education by the beginning of the 1970s. Under this educational idea, teaching contents were largely revised and included much more new scientific knowledge than before. As a result, the number of students who could not keep up with the lessons rapidly increased and developed into a serious social problem.

In the 1960s, following rapid urbanization and industrialization, children faced extreme changes in their everyday experiences. The modernization of society deprived children of real experiences in the nature and of strong ties with family and community. Although children

were taught much knowledge in schools, they did not know how to use such knowledge in their lives. In addition, many children did not have their own ideas and feelings because education since the 1960s did not pay attention to the improvement of children's affective and psychomotor aspects. In this situation, the "education based on locality" became popular among people. The concepts of this education are (1) the educational contents are linked with their local areas, (2) the tie between schools and communities is strengthened, (3) children's daily lives and experiences are formulated into teaching materials, and (4) local tradition and cultures are considered more with children's daily lives. This new movement of education did not deny the importance of academic and scientific knowledge of subject matter. This education stressed that the systematically arranged academic knowledge be taught while carefully taking into consideration the children's point of view. Standing upon this new educational idea, some new methods were invented by Japanese educators such as the **hypothesis experimental learning method**[2] and the **running water system method**[3]. These learning methods aim for children to understand the basic principles of science, while, at the same time, carefully taking into consideration children's experiences and feelings based on human psychology.

Today, Japanese education has again focused more on child-centered education. The course of study issued in the recent years clearly states that education should be changed from teacher-to-student-one-way process to un education system wherein students think about issues deeply, discover new things, and continue to learn further by themselves. Schools have recently been attempting to improve the learning environment by reducing the number of children per class, conducting five-day school weeks, and integrating subject matters. This new education, however, is still an on-going process. Many educators and people are paying close attention to the results of this new education.

[2] The hypothesis experimental learning method was established by Itakura, a former researcher of the National Education Research Bureau of Japan. To learn children the concept of modern science and scientific theories with excitement and joy, this method consists several steps for studying, such as to aware of wonders in their lives, to guess what it happens, to have experiments, and to fomulate conclusions. This method is widely used in the field of science.

[3] The key concept of this method is to learn something from general to specific. It is like the running water which is provided from water supplier (general) to individual home (specific). This method is widely used in the field of mathematics.

CHAPTER 4
BASIC ASSESSMENT THEORY AND PRACTICE

4.1 Assessment and CCA

Before discussing assessment, we must understand the goal of CCA. As mentioned in the prior chapter, "child-centered education" was first conducted systematically by J. Dewey. In his laboratory school, education was implemented to pursue children's immense capability and competence. Through various experiences in their environment, children's potential ability and talent was brought out. There were no traditional written tests checking children's memorization in this school because the test cannot evaluate their capabilities, competence and talent. Instead, the teachers in the school always communicated closely with children, sometimes gave them advices and support, and in other times praised them.

CCA focuses less on children's level of knowledge, and more on children's ways of thinking and problem-solving abilities. In CCA, memorizing facts is not important. What is important is how children think about problems and how they solve them. In this respect, the traditional methods of assessment are neither useful nor effective. Therefore, we must review the traditional assessment carefully and innovate new methods fitting the goals of CCA. The information in the following sections will provide us with a clue for appropriate assessment for CCA.

4.2 History of Assessment

Psychometrics

The science of psychometrics developed from work on intelligence and intelligence testing. The basic concept of psychometrics is that intelligence is innate and fixed much the same as skin color. Once a human being is born, he/she already has a certain level of intelligence and keeps it for his/her lifetime without any changes. In our history of education, children have been classified by level of intelligence and divided into different groups, classes and schools based on their intelligence level. This situation came from the idea of psychometrics.

According to the theory of psychometrics, measurement is used to describe individual characteristics that cannot be changed forever. Once a certain evaluation was done for an individual, this evaluation will remain unchanged for his/her lifetime. In addition, psychometrics interprets individual scores in relation to norms. Individual scores are always compared with peers' score. It is significantly important for psychometrics to clarify one's position in the group or among peers. Therefore, psychometrics does not pay attention to individual improvement and achievement through the learning process. This is the most crucial problem of this theory.

According to recent researches[1], psychometrics has the following two serious problems. The first is the ***assumption of universality***, which means that a test score has essentially the same meaning for all individuals. For example, an ordinal psychometrical test for checking reading competency (which usually includes various factors such as accuracy, smoothness, understanding, and interest) can measure only a part of reading competency (such as only accuracy). Therefore, the test results neither describe total reading competency of the individuals nor show the result of all individuals. However, psychometrics theory interprets the test result as applicable to all individuals and as a complete description of reading competence.

The second is the ***assumption of unidimensionality*** which means that a psychometrics test must target a single attribute of a child. This assumption is completely against our current understanding of attributes, which is that attributes and skills are related to many complex factors. These various factors together can bring out one's attributes.

Despite these many crucial problems, the advocate of psychometrics strongly believes psychometrics is highly scientific and objective. The theory of psychometrics is based on technical issues: how to measure a learner's competence scientifically and objectively by using a statistical approach. However, the psychometrics pays too much attention to technical issues and sacrifices many important factors which strongly influence a learner's learning as well as the field of education.

Educational measurement

At the end of the 1950s, educators had clearly realized the necessity for a new measurement system that corresponds to educational aims and goals and that is based on a series of teaching/learning processes. Because the traditional psychometrics was developed by borrowing the method of statistics and is highly concerned with technical issues to show educational results, it severely lacks educational factors. The new measurement was called ***educational measurement***. The idea of educational measurement was originated by B. Bloom and R. Glaser[2]. Unlike psychometrics, educational measurement pays attention to individual achievement, not comparison of individuals. The appearance of educational measurement was a significant innovation in the field of education.

The key concepts of educational measurement are as follows:

- It focuses on a learner's achievement and compares the past achievement with the current achievement of a learner,
- It checks learner's competence, not his/her intelligence,

[1] Berlak, H., Newmann, F., Adams, E, Archbald, D., Burgess, T., Raven, J. and Romberg, T. (1992), *"Towards a New Science of Educational Testing and Assessment,"* New York, State University of New York Press. Goldstein, H. (1992), *"Recontexualising Mental Measurement,"* London, ICRA Research Working Paper. (Published in *Educational Measurement: Issues and Practice* 1994, Vol. 13, 1)

[2] B. Bloom published "Taxonomy of Educational Objectives" in 1956. R. Glaser published "Instructional technology and the measurement of learning outcomes: Some questions" in 1963.

- It targets the maximum competence of learners, not minimum competence nor fixed performance,
- It is conducted under ordinal learning environment, not under restricted conditions,
- Its aim is to support and facilitate learners, not to discourage them.

Educational measurement uses the terminology of "competence," instead of intelligence. This means that the new measurement does not focus on individual innate characteristics which are already fixed and unchangeable, but on accomplishment through education and training. In addition, it targets the maximum competence, which is the result of the best performance. The traditional tests usually measure learner's minimum level of competence because the tests are conducted under the extraordinary and unusual conditions that may unconsciously put huge pressure on learners. Under such conditions, learners have no way to show the maximum competence. The educational measurement requires teachers to employ various mean of support for learners so that they can achieve their maximum competence[3].

Since the introduction of educational measurement, the role of teachers has changed from small and passive involvement to active involvement. The educational measurement has pushed teachers to the front line of the assessment process.

Educational assessment

Following educational measurement, a new theory appeared in the 1990s called ***educational assessment***. The most important concept in educational assessment is that assessment is for supporting the learner's learning process. According to this idea, learners can realize their learning situation and their achievement level through assessment, and at the same time, teachers can also determine if their teaching is appropriate and effective. This concept is completely different from the psychometrics and educational measurement. Both psychometrics and educational measurement think that measurement is to clarify learner's achievement as a result of learning. This idea of measurement does not adequately consider the learner's process of learning nor dose it support their progress.

R. Glaser[4] explains his idea about educational assessment. According to him, educational assessment should assess the following items:

- Portfolios of accomplishments
- Situations which elicit problem-solving behavior which can be observed and analyzed
- Dynamic tests that assess responsiveness of learners to various kinds of instruction
- Scoring procedure for the procedures and products of reasoning

This means a much wider range of assessment strategies is needed to assess a broader body of cognitive aspects than mere subject-matter acquisition and retention. Recently "***authentic***

[3] This idea is directly related to Vigotsky's the "*zone of proximal development (ZPD).*"
[4] Glaser, R. (1990) "Toward new models for assessment," *International Journal of Educational Research*, 14, 5 p.475-83.

assessment" has become popular in the field of education. The idea of authentic assessment appeared as an alternative form of assessment in the face of criticism of traditional testing which measures only a small part of a learner's learning situation.

The new assessment, however, has been facing severe criticism for being subjective and lacking accountability. Compared to psychometrics and educational measurement, educational assessment relies so much on the teacher's observation and descriptive data instead of highly standardized statistical scores, that it is likely to be subjective and lack accountability. The advocate of educational assessment argues that educational assessment is not designed to be objective and to have accountability, but designed to clarify learner's learning situation and to give feedback to the learner for improving their learning. Therefore, the basic purpose of these two types of assessment is completely different from each other. Therefore, educational assessment does not necessarily concern itself with such criticism because it does not aim to be objective and accountable.

4.3 Major Learning Models

Assessment is directly related to the issue of how learners learn. The research of human psychology has been rapidly developed during the 1900s and has brought various fruitful information to the field of education. Here we review two different learning models: the traditional learning model (called "***Building block model***") and the new leaning model (called "***Cognitive and constructivist learning model***")

Building block model

This learning model has been widely accepted since the beginning of 1900s. This learning model assumes that knowledge and skill can be divided into small components and these components have the same function wherever they are used. According to this model, learners study these components one by one. After mastering a small component completely, learners can study the next component. The basic philosophy of this model is that advanced knowledge and skill are a composition of basic knowledge and skill. In other word, ones who has mastered various basic knowledge and skill can solve advanced and difficult tasks. This is called ***decomposability***.

The popularity of the building block model corresponds with the period of domination of the behavioral psychological approach, which thinks learning to be the relation between stimulus and response (S-R) and assumes that higher levels of learning can be created by accumulation of the S-R relationship. Therefore, the building block model is based on the idea of the behavioral psychological learning approach.

The crucial problem of the building block model is that it focuses only on a learner's mastery level of each small component, based on the assumption that accumulation of simple knowledge and skill develops into complex and advanced knowledge and skill. In this model, teachers always test students' achievement of isolated components and never test students'

comprehensive and integrated thinking process and problem-solving ability because it is believed that these complex abilities can grow naturally when basic components are completely mastered. However, complex knowledge and skill, as we know, not only consists of various different knowledge and skill, but also are complexly intertwined together. Therefore, only mastering simple components is not enough for solving complex problems. We should learn simple knowledge and skill while simultaneously tackling complex problems.

The building block model has another characteristic which is called ***decontextualization***. Decontextualization means that simple components of knowledge and skill can be separated from context. In other word, simple components can function in the same way wherever they are used. According to this idea, all learning can be conduced without any context and all knowledge and skill can be acquired without any consideration of context. For a long time, schools have been eager to provide students with such decontextualized knowledge and skill. As a result, students stopped thinking about how and when they use newly acquired knowledge and skill. They concentrate only on memorizing facts.

The traditional learning model, the building block model, is now facing severe criticism for being inappropriate and lacking learner's cognitive psychology. Although this model is still widely practiced because of its easy application, most educators now realize the problems with this model.

Cognitive-constructivist learning model

Although the building block model thinks learning to be a linear hierarchical process, the cognitive-constructivist learning model views it as the process of developing a kind of network. Learning is not to transfer a new fact to learners in the same form as the original, but is to integrate the new fact with the prior knowledge and to develop a new network system. The cognitive-constructivist learning model is based on the ***cognitive psychological approach*** and ***constructivist*** point of view. Both have been developed since 1970s and has recently gained high popularity in the field of education.

According to the cognitive psychological approach, learning is the process of reorganizing knowledge in the learner's mind. To reorganize knowledge, learners are required to understand a new fact deeply and to interpret it based on their prior knowledge and experiences. Once interpreted, the new fact can be put in an appropriate position in their knowledge network and can become part of one's long-term memory so that one's network of knowledge becomes larger and larger and gains complexity through learning. M. Atkins[5] clarified the learning process by using the ***information-processing model.***

> *Information-processing models of learning tend to have three elements, two of which overlap with constructivist models: a first stage in which through selective attention certain aspects of the environment are filtered for conscious processing; second, active*

[5] Atkins, M., Beattie, J., and Dockrell, B. (1992) *Assessment Issues in Higher Education*, Newcastle School of Education, University of Newcastle

> *mental engagement with the new input so as to make personal sense of it, using selectively recalled prior learning in the process; finally a structuring of the resultant learning in such a way that it can be stored usefully in the long-term memory.*

The constructivist model of learning views learning as construction of knowledge. Each learner is a constructor of his own knowledge network. In this respect, the cognitive psychology and the constructivist model are on the same line. In the view of the constructivist model, assessment of isolated knowledge and skill, which traditional learning model often focuses on, is meaningless. Using this kind of assessment, it often happens that learners get high scores without understanding the concept. Because the traditional tests concern only about simple facts and whether learners memorize them, learners who memorize the facts can easily gain high scores. This kind of learning is now called ***shallow learning***. The constructivist model focuses on ***deep learning*** instead of shallow learning. The new model thinks that assessment should involve learner's knowledge structure and the integration of new knowledge into the prior knowledge.

In the constructivist model, the role of the school, teacher and students should be changed. In the traditional model, the school is a place to provide students with knowledge. In the school, the teachers only ask questions and students answer them. The result of this equation of learning is that learning becomes an incidental rather than intentional process. The new model of learning in which students and teachers jointly engage in knowledge construction and in which teachers progressively turn over metacognitive functions to the students so that students are taught how to learn, can result in learning being an intentional process.

N. Entwistle[6] briefly concluded about what deep learning is. According to him, deep learning has the following characteristics:

- An intention to understand material for oneself
- Interacting vigorously and critically with the content
- Relating ideas to previous knowledge and experience
- Using organizing principles to integrate ideas
- Relating evidence to conclusions
- Examining the logic of the argument

Recently most educators and teachers are deeply concerned about this new model in teaching and learning practice. Based on this theory of learning, assessment should also be changed.

[6] Entwistle, N. (1992), *The Impact of Teaching on Learning Outcomes in Higher Education*, Sheffield, CVCP, Staff Development Unit.

4.4 Interpretation of Children's Performance

Currently there are two major approaches to testing children's performance: ***norm-referenced measurement*** and ***criterion-referenced measurement***. In the history of education, the former approach has been dominant in the measurement of children's performance. However, the latter approach has recently been gaining popularity and is beginning to be used in many educational institutes and schools.

Norm-referenced measurement

This measurement is still common in the field of education. In this approach, children's performance on a particular test is compared with the performance of other children who also took the same test. The children who took the same test as a group establish a norm. Children's norms can be grouped by various factors such as age, grade level, gender, ethnicity and geographical location. Based on the norm, each child is compared with other children and ranked among their group. Intelligence quotient (IQ) and the deviation value are examples which are widely used as measurement of children's performance.

The norm-referenced measurement is rather technical and scientific, and it is also highly objective and accountable, because it is based on statistical analysis of the testing result. In addition, it is easy and takes little time to process the data because all the data of children's performance are quantitative data usually shown as numbers. Moreover, it is easily accepted among the public because the interpretation of children's performance in this measurement is suited to humanity's natural desire to compete with each other and to rank themselves within a group.

However, the main problem of this measurement is that it does not accurately show the result of children's performances. In this measurement, the issues of how much children achieved according to the learning objectives and goals is completely ignored. Each child does not know his/her real achievement, but knows only his/her rank among the group. As long as the norm-referenced measurement is used, the real improvement of children, which is the most important factor for education, cannot be realized.

Criterion-referenced measurement

The alternative to the norm-referenced measurement is the criterion-referenced measurement. Unlike the norm-referenced measurement, this measurement focuses on individual improvement and achievement based on learning objectives and goals. In this measurement, the position of an individual child among the group is not an important concern. What is important is what the individual child understood and mastered and what he/she did not understand. Therefore, since the real purpose of education is to improve children's performances, the criterion-referenced measurement is more appropriate than the norm-referenced measurement.

At the beginning of the 20th century, E.L. Thorndike already touched upon two different measurements in his publication entitled "The Nature, Purpose and General Methods of

Measurement of Educational Products[7]." According to him, the "methods of average error" or norm-referenced measurement measures how much children can do when they are given the same assignment while the "right and wrong cases" measurement or the criterion-referenced measurement measures how well children deal with difficult assignments and how they can solve them. Although both measurements have different advantages, the latter would become a dominant form of educational measurement in the future. In 1918, he thought the criterion-referenced measurement to be an important form for educational purposes.

The difficulty of the criterion-referenced measurement is to set up clear criteria which children should achieve during lessons. The criteria should be in line with educational objectives and goals and should consist of several standards which are the base of a teacher's judgment. In addition, the criterion-referenced measurement relies highly on teacher's qualifications and skills, such as familiarity with children, careful observation of children and teaching skills. Therefore, this measurement is less reliability and is less accountable than the norm-referenced measurement.

The following table shows the differences between the norm-referenced and the criterion-referenced measurements.

Table 4-1 Norm-Referenced and Criterion-Referenced Measurements

CHARACTERISTIC	NORM-REFERENCED MEASUREMENT	CRITERION-REFERENCED MEASUREMENT
Comparisons made	Score to group average	Score to minimum standard
Purpose	Survey or achievement test	Mastery or performance test
Validity	Content, criterion or construct	Content and curricular
Degree of validity	Dependent on instruction	Usually high
Reliability	Usually high	Usually unknown
Importance of reliability to test model	Important	Unimportant
Traits measured	Exist in varying degrees	Present or not present
Usability		
Diagnoses	Low general ability	Specific problems
Estimation of performance	Broad area	Specific area
Basis for decision making	How much was learned	What has been learned
Item difficulty	Medium	Easy items
Administration	Standardized	Variable
Size of group tested	Large	Small
Content covered	Broad	Narrow
Skills tested	Integrated	Isolated
Control of content	Publisher	Instructor or school
Limitations	Inability of school personnel to interpret tests on local level	Difficulty of constructing quality tests
Versatility	Extensive	Limited

[7] Thorndike, E.L., "The Nature, Purpose and General Methods of Measurement of Educational Products," NSSE, 17th Yearbook, Part II, 1918.

Comparison of results between schools	Readily available	Not yet developed
Distribution of scores	Normal (one)	Rectangular (two)
Range of scores	High	Low
Repetition of test if test is failed	No, one test	Until mastery occurs
Basis for content	Expert opinion	Local curriculum
Quality of items	High	Varies, depending on ability of test constructor
Pilot testing	Yes	No
Basis of item quality	High discrimination	Content of items
Students preparation	Studying for test does not help much	Studying for test should help
Teaching to test	Difficult to do	Encouraged
Standards	Averages	Performance levels
Scores	Ranking standard score, or number correct	Pass or fail
Type of measure	Relative	Absolute
Purpose	Ranking students	Improving instruction
Revision of test	Not possible	Often necessary
Student information about test content	Little available	Known in advance
Motivation of students	Avoidance of failure	Likelihood of success
Competition	Student to student	Student to criterion
Domain of instruction	Cognitive	Cognitive or psychomotor

Source: Ornstein, A.C. and Hunkins, F.P., "Curriculum, Foundations, Principles, and Issues, (3rd edition)," Allyn and Bacon, p344.

4.5 Treatment for the Result of Children's Performance

High-stakes measurement

In our society, there are various tests which people have to face to determine their direction of life. Entrance examinations into higher education institutions and various certification tests are good examples. These tests are usually conducted widely by authorities, such as the national and local governments and authorized institutions. This kind of test is called a high-stakes test and measuring a learner's performance by using this test is called a ***high-stakes measurement***.

The social, educational and even individual impact of the high-stakes measurement is enormous. Because the high-stakes test is often conducted widely at the national level or regional level and the result of the test is statistically analyzed using norms, it can be possible to rank individuals or a group amongst all the people who took the same test. Based on these rankings, people tend to determine whether this person is clever or not, or this school is good or not. Once individuals and schools gain a good reputation based on the results of the high-stakes test, this reputation lasts for a long time. Those individuals and schools climb up a successful ladder in society. In this social phenomenon, teachers tend to teach children in preparation for the tests, not for children's individual achievements. In the practice of teaching for test preparation,

teachers are usually less concerned about original educational objectives and goals, and focus much more on technical issues, such as how to get higher scores on tests. Therefore, education can become distorted if high-stakes tests are highly promoted.

Low-stakes measurement

The alternative to the high-stakes measurement is the low-stakes measurement. Unlike the high-stakes measurement, the low-stakes measurement is usually conducted in small groups and initiated by an individual teacher. Teachers must always check children's level of understanding and achievement, and give necessary information to them in order to improve their learning. For this purpose, the low-stakes measurement is appropriate because it provides children with educationally important information.

The low-stakes measurement is an everyday-assessment of children's performance implemented by teachers. The result is immediately given to children as a form of description or an oral form. Based on the result, children can recognize their level of learning and revise their style of learning if necessary.

4.6 Data Collection for Assessment[8]

Before a teacher can efficiently evaluate a child's performance, teachers must collect various data. Without data, teachers cannot make any rational decisions nor evaluate children's performance correctly. In this respect, teachers must be familiar with how to collect various data. There are usually two major ways of data-collection: a test method and an observation method.

4.6.1 Date collection by test methods

In the test method, there are various kinds of tests such as the objective test, essay-type test, problem-situation test, questionnaire, oral questions, etc. These various tests have different characteristics and target different areas of children's competence. Teachers should use these different tests depending on what kinds of data they will collect.

[8] The content of this section is mainly referred to the "Educational Assessment 2003 *(Japanese)*" written by the Institute of Education of Japan.

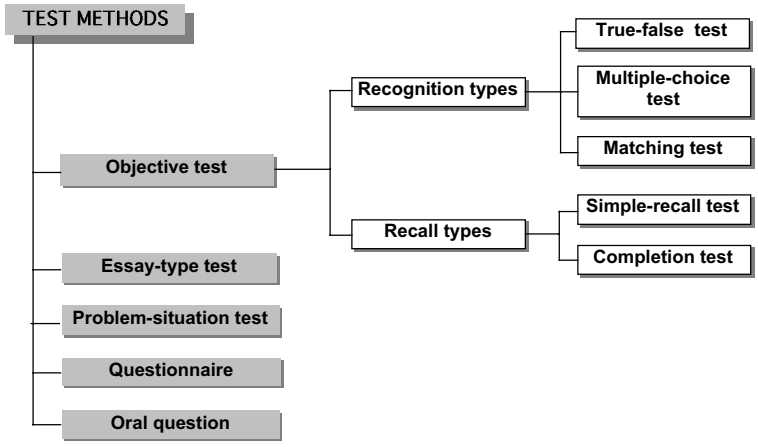


Figure 4-1 Classification of Test Methods

Objective test

The objective test is the best way to collect reliable and objective data, because of the low possibility of subjectivity of the teacher. However, the objective test does not produce completely accurate data. It should be used carefully. The objective test is usually divided into recognition types and recall types of tests.

Recognition types of tests

Recognition types test is one requiring children to judge whether a given statement is right and confirm whether it suits what they have learned, and recognize a relation between given issues. These include true-false, multiple-choice and matching tests.

True-false test: True-false test, which is also called ***yes-no test***, has been widely used since the first introduction of the objective test. However, it is not carefully used as much as before. The main reason is that a high score can be obtained accidentally without understanding the context of the test.

The following issues should be carefully considered when a true-false test is used:

- ✧ True statements and false statements should be arranged randomly,
- ✧ Statements which are not clearly either true or false should not be chosen,
- ✧ In the statements, double negative should not be used,
- ✧ The numbers of true statements and false statements should be even, and
- ✧ When enough time has been allocated to answer all questions, it is fine to count the number of right answers and mark scores. However, not enough time was given and most children could not finish answering all the questions, it is better to subtract the number of wrong answers from the number of right answers. This is because of the need to consider the possibility of accidentally getting right answers.

Multiple-choice test: This test is a transformation of the true-false test. More than two statements are prepared, and true statements are chosen as the correct answer. This test is highly valid in order to check children's level of understanding, judgment and deductive ability because children have to compare one statement with the others and choose the most appropriate ones. In addition, this test can check children's performance objectively. Recently, this type of test is the most popular.

Teachers, however, do not always rely on multiple-choice test because this type of test cannot check children's creativity and originality. In addition, the recognition types of test cannot assess children's thinking process such as comparing, recognizing and judging, because the result is shown only as a symbol such as "◯." Therefore, this type of test is not valid for the assessment whose purpose is to check children's thinking process or to check whether children understand the content deeply.

To use the multiple-choice test, teachers should carefully consider the following points:

- ✧ Wrong answers should be plausible, which children may answer when teachers use recall types of test,
- ✧ When teachers check children's advanced ability of judging, thinking and understanding, the number of choices should be increased and the difference among the statements should be smaller. On the other hand, when teachers use multiple-choice test for lower primary level, the opposite manipulations should be done,
- ✧ The position of right answer should be arranged carefully, and
- ✧ The length of each sentences should be similar.

Matching test: Matching test is a form of the multiple-choice, which means that several multiple-choices are integrated into one form. This test is good for checking children's level of knowledge and comprehension of relation between two items. When using matching test, teachers should carefully consider the following points:

- ✧ Each should match with only one other,
- ✧ Items in the group should be the same type of items, and
- ✧ The number of items in the choice group should be bigger than that in the problem group. In this case, children have to continue choosing appropriate items until the end.

Recall types of test

Instead of the recognition types of tests, recall types of tests require children to make their own answers based on their knowledge and understanding in given styles of the questions. Therefore, compared with the recognition-types of test, the recall types of test require children to have a more clear memory. There are various types of recall tests, such as the simple-recall test and completion test.

Simple-recall test: This test is good for checking children's memory and knowledge of simple facts. This test can be valid when there are only one or two right answers. If there are various answers for one question, the simple-recall test looses its objectivity. In addition, if teachers expect children to display complex knowledge, the test will be more similar to an essay test, not a simple-recall test. This test, as a result, is not appropriate for checking advanced level of understanding and abilities of judgment and deduction. If teachers often use this test, children's learning may be reduced to only memorization of segmental facts.

Completion test: Completion test is a form of the multiple-simple-recall test. However, the validity and benefits are different from the simple-recall test. Completion test, unlike the simple-recall test, can check children's advanced levels of comprehension and Judgmental abilities in a certain context. It usually includes questions based on complex internal relations within the context. This test is a significantly useful test form and has been widely used recently. In Japan, the test which integrates the multiple-choice test with the completion test (called the ***multiple-choice completion test*** or ***controlled completion test***) has become popular.

To use this test, teachers should carefully consider about the following points:

- ✧ The sentences which are presented as questions and need to be completed by children should be clear and meaningful,
- ✧ Avoid making a blank at the beginning of a sentence and avoid increasing the number of blanks in the sentence in order that children can understand the meaning of the sentence, and
- ✧ The blank parts should be important concepts or words, not subsidiary items.

Essay test

This test has been used for a long time as the traditional testing method. However, it was criticized in the movement of educational measurement, which appeared at the beginning of 20th century. The advocate of *educational measurement* pointed out the lack of objectivity of this test. Since then, the essay test was replaced by the objective test. The recovery of the essay test in the field of education corresponded to the emergence of idea of *educational evaluation.* According to educational evaluation, the essay test is significantly valid for checking children's achievement of educational goals though it still has a weak point regarding objectivity and reliability.

The essay test is significantly useful when checking the competence of children on the following points. The objective test is not appropriate for this purpose.

- ✧ Comparison between two items,
- ✧ Understanding of relationship among items,
- ✧ Explanation of events and ability of induction,
- ✧ Summarizing,

- ✧ Analyzing and classifying,
- ✧ Applying to knowledge and principles,
- ✧ Evaluating, criticizing and appreciating, and
- ✧ Attitude, taste and value.

Problem-situation test (or interpretation test)

The problem-situation test was invented as an applied form of both the objective test and the essay test. A.G. Wesman commented about the problem-situation test:

> *Objective test is the test form to assess "what do you know?" Essay test is the test form to assess "what can you tell?" Problem-situation test is the test form to assess "what are you able to find?" and "what are you able to do?"*

The problem-situation test is one of the best test forms to assess children's thinking ability, application skills and creativity. Because it usually shows children a new situation and lets them answer based on their knowledge, this test requires children to have significantly advanced problem-solving abilities including analysis, synthesis, creativity, evaluation, and criticism.

The problem-situation test consists of two kinds of tests: problem-situation test with an essay test and that with an objective test. The latter is the test form whose answer is based on the objective test.

Questionnaire (or Self-inventories)

To check children's interest, desire, attitude and character, it is difficult to use tests, but it is valid to use a questionnaire. Questionnaires are usually prepared with many simple questions, which can be answered "Yes" or "No," "Agree" or "Disagree." When using questionnaires, it is important for teachers to check each question carefully whether it is necessary to ask and whether it does not invade children's privacy.

Oral question

The oral question form is also widely used form to assess children's achievement. In the oral question form, a teacher usually asks questions in the class, children raise their hands, and then the teacher lets them answer. This can be easily done whenever and wherever they are. However, if a teacher often uses this method, a teacher tends to assess characteristically outgoing children and children who often answer as "good children." Therefore, it is important to use the other tests such as a writing test with the oral question in order to avoid.

4.6.2 Date collection by methods of observation, rating, etc.

Besides the test methods, there are more methods to collect data: observation method, children's works, rating method, anecdotal record, interview, self-assessment, peer assessment, and portfolio assessment.

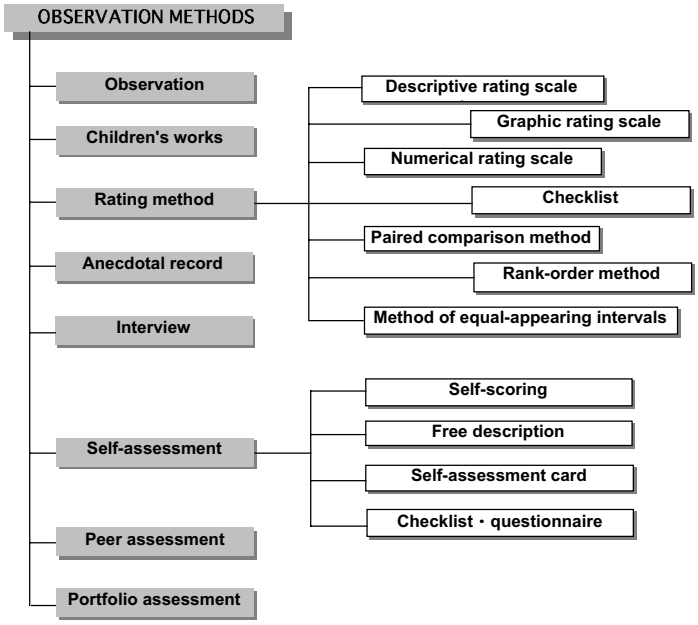


Figure 4-2 Classification of Observation Methods

Observation

The observation method is the way of observing children's performance at various situations of their daily life and evaluating it. This method can be conducted easily whenever, wherever and by anybody. In addition, the result of the evaluation can be immediately given back to children on the spot. On the other hand, this method is often used ad hoc and lacks logical structure. In addition, it is less objective because the result is highly depending upon the observer's sense.

Children's works

This method targets all works of children during lessons such as report, writing, drawing, handicraft, and video recording. These works of children are the best objects for assessment. However, the following issues should be carefully considered:

- ✧ Prior to assessment, viewpoints for assessment should be decided clearly,
- ✧ Not only the finished works themselves but also the process of producing works and the children's efforts should be assessed, and
- ✧ Self-assessment and peer-assessment should be used with assessment of children's works.

Rating method

This method can be considered as a kind of observation method and the method of assessing children's works. Based on observation, children's performance is assessed by scale. There are various rating methods.

Descriptive rating scale

This is the way of assessing children's performance by description of the degree of value. Evaluators must create this description prior to assessment.

<Example>

A. Fully satisfied:	*To understand characteristics of each state and division such as population, topographical features, industries, and communication and to realize how these items are related to each other.*
B. Satisfied:	*To understand characteristics of each state and division such as population, topographical features, industries, and communication.*
C. Need to improve:	*To understand some characteristics of each state and division, but not to completely understand these issues.*

Graphic rating scale

Instead of a description, a line with numbers or alphabet is used to assess children's performance. This is based on the idea that all performance is equal in terms of quality.

<Example>

Numerical rating scale

Without any descriptions and graphics, children's performance is assessed by using a number or symbol. In the case, number one means less than average, number 2 means average and number 3 means more than average.

Checklist

Checklist is widely used and gives useful information for evaluators. In this method, the teacher checks whether each child has a particular behavioral characteristic. Unlike descriptive rating scale and graphic rating scale, this method focuses only on two possible results; yes or no.

<Example>

Viewpoints \ Children	A	B	C	D
To be able to plan well	／		／	
To be able to express opinions	／	／	／	
To be responsible	／			／
To be able to cooperate with others		／	／	／

Source: Institute of Advanced Education of Japan, "Educational Assessment 2003."

Paired comparison method

This method is suitable for the assessment of drawings and artwork. Each drawing or artwork is compared with the others and a ranking is decided. This method is the most solid way of assessment. However, it takes a lot of time because evaluators have to compare artwork for $n(n-1)/2$ times where the number of drawings is n. For example, in the case of 40 children in the class, the teacher has to compare works for 780 times.

Rank-order method

This method is a simplified version of the paired comparison method. First, all the works and drawings are ranked temporarily. Then, one work is compared with the next one. Finally the ranking of all the artworks is decided. This method is widely used because this takes less time than the paired comparison method.

Method of equal-appearing intervals

First, some artworks or drawings are chosen based on a quality of value. For example, one artwork should be on average, another should be good, and the other should be bad. Then, all the works are assessed based on the standard scale set by the pre-chosen works.

Anecdotal record

Anecdotal record is based on the observation method like the rating method. However, there is a significant difference between the anecdotal record and the rating method. Although the rating method keeps the records of children's performance in the form of quantitative data, the anecdotal record keeps them in the form of a description or story. To use this method effectively, the following issues should be carefully considered:

- ✧ To keep reliability of the anecdotal record, the facts should be described objectively. If evaluators add their interpretations and opinions, these should be clearly separated from the facts,
- ✧ Usually children's behavior and attitudes which are against the evaluator's own sense of values are easily picked out and recorded by evaluators. Therefore, evaluators should try to describe children's performance objectively without allowing their own sense of value to interfere, and

- ✧ It is important to record events which although may superficially appear insignificant may actually have a big impact on the child.

Interview method

This method involves teachers interviewing children sometimes with the parents present. Although it takes a lot of time, teachers can know the details of children's feeling and behavior through direct communication. However, this method requires good relationships between teachers and children to collect reliable information. Therefore, teachers should make their best effort to create a good environment during the interview.

Self-assessment

Self-assessment has recently become popular. Due to the developments in child psychology, the importance of meta-cognition is highly paid attention to by many educators and teachers. Self-assessment can strengthen children's meta-cognition. There are several ways for self-assessment, such as self-scoring, self-describing, self-evaluation sheet, checklist, and questionnaire.

Self-scoring

After conducting an examination, children check their answers by themselves. This method can be more effective rather than teacher's scoring because it can make children recognize what they understood and what they did not understand.

Self-describing

Children review their activities and write their opinions in the form of report, diary, memo, etc.

Self-evaluation sheet

This is widely used in schools because it is systematically developed and is easily used. Children can also easily write their opinions by using the formatted sheet.

<Example>

<table>
<tr><td colspan="2">Date:</td><td rowspan="7">Self-evaluation</td><td>1. I prepared well prior to the lesson.</td><td>A - B - C - D</td></tr>
<tr><td colspan="2">Time:</td><td>2. I learnt actively during the lesson.</td><td>A - B - C - D</td></tr>
<tr><td colspan="2" rowspan="5">Lesson content:</td><td>3. I participated actively.</td><td>A - B - C - D</td></tr>
<tr><td>4. I learnt and found new things.</td><td>A - B - C - D</td></tr>
<tr><td>5. I expressed opinions.</td><td>A - B - C - D</td></tr>
<tr><td>6. I listened to other's opinions carefully.</td><td>A - B - C - D</td></tr>
<tr><td colspan="3">A: Fully Satisfied, B: Satisfied, C: Little Unsatisfied, D: Unsatisfied</td></tr>
<tr><td>Questions to Teacher:</td><td>Comment from Teacher:</td><td colspan="3">Next Schedule and Preparation:</td></tr>
</table>

Source: Institute of Advanced Education of Japan, "Educational Assessment 2003."

Peer-assessment

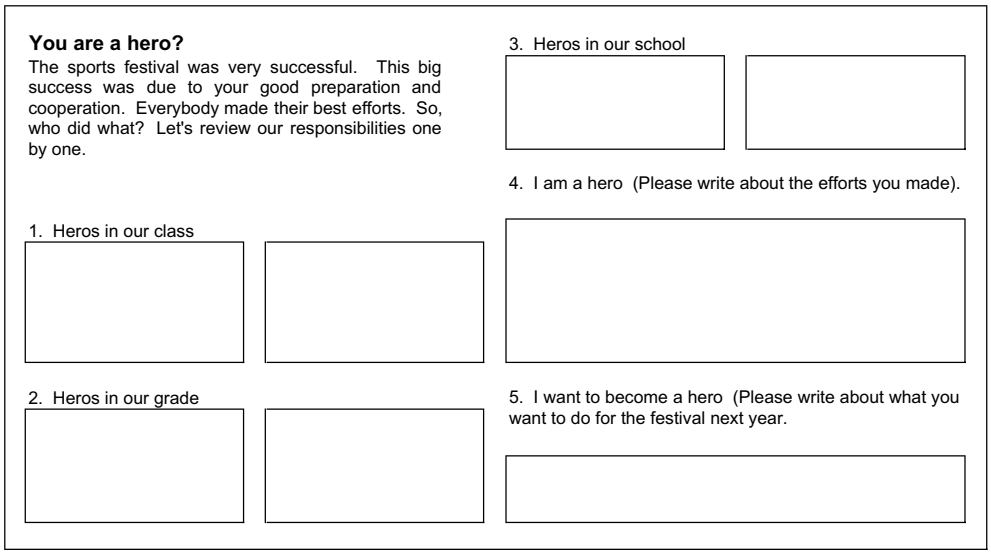
Like self-assessment, peer-assessment has also gained a lot of attention by many educators and teachers because it can play an important role for strengthening children's meta-cognition. The same methods for self-assessment can be used for peer-assessment. For example, self-scoring can be used in the form of peer-scoring and self-evaluation can also be used in the form of peer-evaluation. However, this method should be carefully used in class. To use the peer-assessment effectively, it is the requisites establishing a good relationship among classmates.

For peer-assessment, there are the ***guess-who test*** and ***sociometry test*** which are highly standardized with significant objectivity.

Guess-who test

Guess-who test was developed by H. Hartshone and M.A. May in 1930s. To assess behavior and characteristics of a child, teachers let some peers who know him very well describe him. The procedure of this test is first all children in the class choose one or several friends who have good characteristics or bad characteristics. One who was chosen as having good characteristics can get one point. On the other hand, one who was chosen as having bad characteristics will get minus one point. Then, the total points can be the result of the assessment of a particular child.

<Example>



Source: Institute of Advanced Education of Japan, "Educational Assessment 2003."

Sociometry

Sociometry was developed by J.L. Moreno in 1934. This is similar to the guess-who test, but it is more simple and easier. A child writes names of friends whom he wants to play with, he wants to study with, or he wants to become a close friend of. In this method, the interpretation of the relation between the child who chose and the child who was chosen up is stressed.

Portfolios

Portfolios have become popular following the strong criticism of traditional assessments. Many educators and teachers have thought that traditional assessments, especially assessments by objective tests, measured only a part of children's learning. Many educators have strived to find an alternative assessments, which can measure children's whole learning performance.

Portfolios were originally introduced by H. Gardner in the 1980s as a way of support for individual learning. This is based on two important theories: ***authentic assessment*** and ***performance assessment***. For an assessment to be authentic, it must engage children in a task or activities that are found in the real world or resemble the real world[9]. The test cannot be contrived by the teacher. In addition, teachers assess children's learning by focusing on the task or activities children are engaged in. These basic theories are significantly important for educators and teachers to understand when they use the portfolios as a tool of assessment.

The portfolio is a collection of children's work aiming to assess their improvement and achievement through learning from various points of view. Children's work can include a wide variety of things which show children's understanding, skill, thinking and feeling, such as writings, drawings, pictures, video tapes, test results, etc. There are usually two kinds of portfolios: children's portfolio and teacher's portfolio. The former aims to assess children's improvement and achievement and develop their ability of meta-cognition. The latter aims to assess qualification of the teacher and to improve his/her teaching technique.

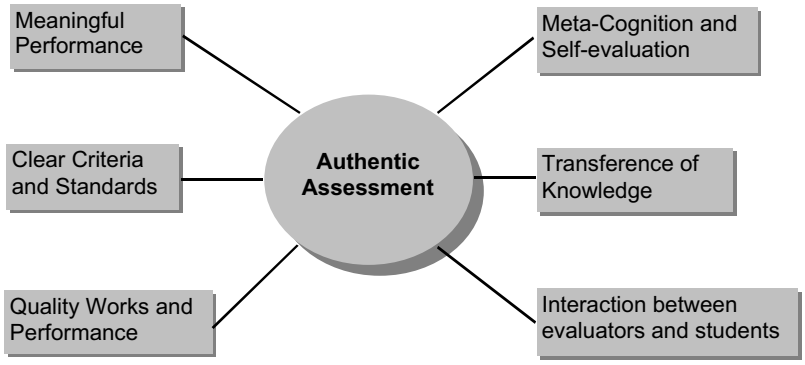


Figure 4-3 Authentic Assessment

The portfolio assessment emphasizes on qualitative data, not on quantitative data. In this assessment, prior to his/her study, each child sets up their own goal through discussion with parents and teachers. Then, after completion of their study, they assess their achievement

[9] Carol A. Meyer, "What's the Difference Between 'Authentic' and 'Performance' Assessment?" *Educational Leadership* (May 1992), pp.39-40.

based on their previously decided goals. The goals are shown by description called *"rubric*[10]*."*

Portfolios is a kind of structured observation and rating method. Therefore, it has the same weakness as the observation method. The following weakness should be carefully considered when portfolios is used.

- ✧ It seems to be less reliable than quantitative ways of assessment,
- ✧ It takes much more time than the traditional ways of assessment,
- ✧ It seems to be difficult for children to set up their own goals,
- ✧ It can become a useless collection of data unless a goal and criteria are set up clearly, and
- ✧ It is difficult for teachers to judge children's improvement and achievement through analyzing data collected.

4.7 Practice of Assessment[11]

4.7.1 Assessment of knowledge and comprehension

Assessment of knowledge

Knowledge is tightly related to comprehension (explained in the next section). B. Bloom described in his cognitive domain of the Taxonomy of Educational Objectives that "knowledge" is the first step of the domain and "comprehension" is the second step. On the other hand, according to educational methodological point of view, "knowledge" is the outcome of comprehending something. Nevertheless, these two cannot be separately considered. Recent psychological research give us important information about knowledge: knowledge is also tightly related to human memory. When we discuss knowledge, we must think about strength, clarity and recognition of memory. Therefore, knowledge has a dual structure: comprehension and memory. Which factor is stronger or weaker depends on the type of knowledge. The following three are the classifications of knowledge from simple and segmental to complex and integrated: (1) Knowledge of symbols and facts, (2) Knowledge of methods and processes, and (3) Knowledge of relationships and abstract knowledge.

To assess knowledge, various ***objective tests*** are widely used. The ***recognition test*** is the most appropriate for assessing simple knowledge which should be recalled easily whenever necessary. The ***multiple-choice test*** is the least appropriate in this case in terms of its validity. To assess complex and abstract knowledge, the ***essay test*** is the most appropriate.

Assessment of comprehension

As mentioned above, knowledge and comprehension are tightly related to each other and these

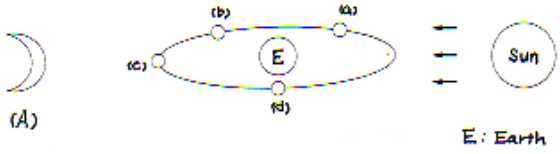
[10] The *rubric* was originally developed in U.S. in 19990s to assess children's advanced abilities such as the faculty of thinking and judging, expression, and problem-solving skills. It consists of the assessment criteria in the form of description and the examples showing the anchor point.

[11] The content of this section is mainly based on "Educational Assessment 2003" written by the Institute of Education of Japan.

levels are often assessed together. However, there is a significant difference between knowledge and comprehension. Although knowledge is the concept which is the result of understanding and learning, comprehension is the situation in which one understands something. In other words, comprehension means that one recognizes various factors consisting of an issue and their inter-relations. Therefore, assessment of comprehension is not to check how much children know such as requiring children to describe something or explain something, but to test children's level of understanding about important factors and their inter-relations. Comprehension varies from shallow level to deep level. Assessment of comprehension should check children' depth of understanding.

For assessing comprehension, the ***essay test*** is highly appropriate. In addition, some ***objective tests***, such as ***multiple-choice, completion***, and ***matching***, are also widely used for this purpose. Moreover, ***observation*** and ***interview*** can also play an important role to assess children' comprehension level.

<Example>
When can the shape of the moon be observed as seen in (A)? Please choose the answer from (a), (b), (c) and (d).



4.7.2 Assessment of thinking and judgment

Thinking is the mental process in which people analyze the situation that they are facing and create new ideas to solve problems. Thinking is usually classified into two types: logical thinking and creative thinking[12].

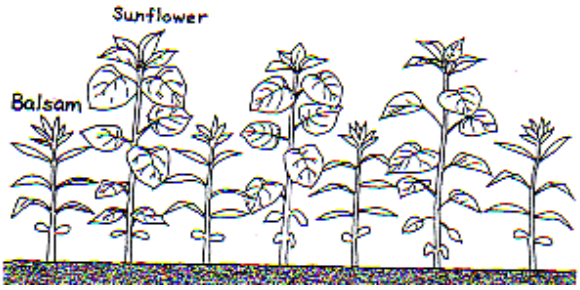
Assessment of logical thinking
Logical thinking includes deductive thinking and inductive thinking. Deductive thinking is the ability to judge validity by using knowledge and principles. Inductive thinking is the ability to draw a conclusion by interpreting various materials and data.

To check these thinking abilities, ***situational questions*** are the most suitable. However, the usage of situational questions is different between checking two thinking abilities.

[12] According to J. P. Guilford, thinking is classified into "convergent thinking" and "divergent thinking." "Convergent thinking" is same as logical thinking and "divergent thinking" is same as creative thinking.

*<Example of Testing **Deductive Thinking**>*

Maung Maung planted sunflowers and balsam in the same garden, and is checking their growing process. Answer the following questions.



1. If the sunflower grows well, how will balsam's growth progress?
- *a) It will grow well like the sunflower.*
- *b) It continues to grow the same as before.*
- *c) It does not grow well.*

2. Think about your answer to Question 1. Why does the balsam grow like that?
- *a) Because the balsam competes with the sunflower.*
- *b) Because the sunlight cannot reach the balsam because the sunflower blocks the sunlight*
- *c) Because the balsam's growth is not affected by the sunflower's growth.*

*<Example of Testing **Inductive Thinking**>*

1. Look at the following graphs and choose the correct statements from a) to f).
- *a) The ratio of the population over 60 years old to the total agricultural population is decreasing.*
- *b) The ratio of part-time farmers whose main income comes from outside of farming to the total agricultural population is increasing.*
- *c) It is obvious that part-time farmers whose main income comes from outside of farming is decreasing and full-time farmers is increasing.*
- *d) The ratio of full-time farmers to the total agricultural population has been decreasing until 1975, but it did not decrease after that year.*
- *e) Following an increase of the ratio of part-time farmers whose main income comes from outside of farming, the total population of farmers is increasing.*
- *f) The number of female farmers is 1.5 times more than that of male farmers.*

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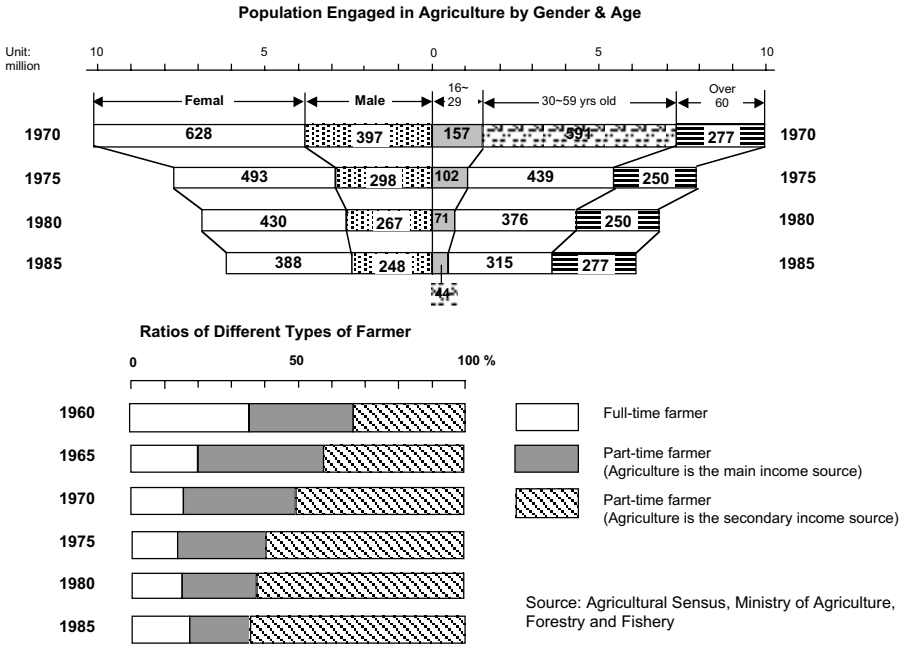


2. Based on the graphs above, describe the future of the Japanese agriculture.

Assessment of creative thinking

Creative thinking is not like logical thinking. It is a way of thinking that creates unique and extraordinary ideas. In this way of thinking, inspiration and imagination are significantly necessary. To assess children's creative thinking, the ***problem-situation test*** is the most suitable. In addition, ***observation*** can be used for this purpose.

<Example>
Life-expectation has been becoming longer and longer following improvements in medical science and people's standard of living. If this social situation continues in the future, what social changes and social problems would appear in our society? Write your own ideas.

4.7.3 Assessment of skill and expression

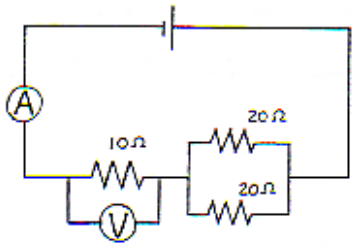
Assessment of skill

Skill is an integrated comprehension with action. For example, a person is able to use a computer (Skill for computer usage). In this case, the person understands how to use a computer (Comprehension) and manipulates the computer (Action). Therefore, skill has a dual

structure: comprehension and action. These two factors should be assessed together in order to assess skills. In this case, ***performance assessment*** is the most appropriate assessment. This includes checklist, assessment scale, observation of children's works, reports and notebooks, interview, recording, and video-taping. In performance assessment, teachers create a criteria for assessment, *rubric*, beforehand and assess children's performance based on the *rubric*.

<Example>

Arrange an electric circuit like the following picture. Measure electricity and fill in the blanks in the table below. In addition, write down the correct term for the electrical current.



Voltage (V)	1.0	2.0	3.0	4.0	5.0	6.0
Electrical current ( )						

Rubric:

Score A: Meet more than 7 items

Score B: Meet 5 to 6 items

Score C: Meet less than 4 items

Items:

- *By using a lead code, the circuit is arranged appropriately in the wiring,*
- *An ammeter is connected appropriately,*
- *A voltmeter is connected appropriately,*
- *The correct connecting plug of the ammeter is chosen and connected,*
- *The correct connecting plug of the voltmeter is chosen and connected,*
- *Voltage is measured correctly by changing voltage,*
- *A unit of electrical current is written correctly, and*
- *The task is completed within the limited time period.*

Assessment of works and personal expression

Children's works such as handicraft and calligraphy and personal expression such as a music and gymnastics are usually assessed by using rating methods. For example, it includes a rating scale, check list, paired comparison method[13], rank-order method[14], method of equal-appearing

[13] One work is compared with the all other works each by each. Then after comparison, the rank of all the works is decided. This is the most stable way of rating, but it takes a lot of time.

[14] All the works are first assessed as a whole. Then, each work is assessed by using paired comparison method.

intervals[15], etc. Finished work and personal expressions are children's specific learning outcomes, which already include their skill level, knowledge and understanding levels and level of creativity. There are two ways to assess children's knowledge, comprehension, skill and creativity. One is a written test to measure children's ideas. Another way is an assessment formed as a rating scale to measure children's level by observation. Generally, when a rating scale is used as an assessment tool, rating is conducted by each key factor. For example, in the case of a drawing, key factors may be composition, color, and impact.

4.7.4 Assessment of interest, passion and attitude

Interest, passion and attitude are different from knowledge and skill. These are kinds of sources that provide energy for showing one's competence. Although a person's competence is usually described with the sentence of "Be able to do something," a person's interest, passion and attitude are often described with the sentence of "Will do something." Interest, passion and attitude are directly related to emotional tendencies, such as "like or dislike," "accept or reject," etc. Therefore, interest, passion and attitude strongly influence a person's action.

There are two major ways to assess children's interest, passion and attitude. One is a direct way that deals with children's real action directly by using observation, anecdotal record, checklist, and rating scale. Another way is an indirect way that deals with children's behavior through their expressions by using interview, questionnaire, essay test, problem-situation test, guess-who test, inspection of diary, essay and a record of books read.

<Example of Questionnaire>

After learning about "environmental pollution," what do you think about the environment?

a) To reduce environmental pollution. We should pay more attention to this issue, not only industries and government.

b) To reduce environmental pollution. Industries and government should make their best efforts.

c) *I am not interested in environmental pollution.*

[15] First several works which are good, fair, and one needs to be improved are selected among the all works. Then, each work is assessed based on the selected works.

Table 4-2 Assessment Points and Assessment Tools

Assessment Points		Assessment Tools
Knowledge / Comprehenshion	Knwoledge	Objective test (Simple recognition, multiple-choice, matching, choice-matching, true and false, etc.) and essay test
	Comprehension	Essay question, objective test (multiple-choice, matching, choice-matching, completion), and interview
Thinking / Judgment	Thinking / Judgment	Problem-situation test (essay test style and objective test style)
	Creativity	
Appreciation	Art works / Music	Checklist, rating method, and questionnaire
Skill / Expression	Reading / Speaking / Listening	Objective tests
	Writing / Calculation / Usage of materials	Checklist, rating scale, and objective tests
	Expression / Experiment / Action	Checklist, rating scale, and method of equal-appearing intervals
Interest / Willingness / Attitude	Interest / Willingness	Checklist, rating scale, questionnaire, and self-assessment
	Study habit / attitude	Checklist, rating scale, questionnaire, and self-assessment
	Value / Opinion	questionnaire and essay test

Reference:

Gipps, C.V. "Beyond Testing: Towards a theory of educational assessment," 1994, RoutledgeFalmer.

Institute of Education of Japan, "Educational Assessment 2003," 2003, Toshobunka *(Japanese)*

National Research Council, "How People Learn, Brain, Mind, Experience and School," 2000, National Academy Press, Washington, D.C.

National Research Council, "Knowing What Students Know: The Science and Design of Educational Assessment," 2001, National Academy Press, Washington, D.C.

CHAPTER 5
EDUCATION SYSTEM OF MYANMAR AND CCA

5.1 Curriculum Issues

Myanmar's educational philosophy

In Myanmar's schools, rote-learning and memorization are commonly observed. Teachers are usually standing at the front of the classroom and instructing children on the contents of the textbooks. Their instruction follows the textbooks strictly. Children listen patiently to teachers during lessons. At the end of the class, children always recite and memorize the textbooks. In this educational practice, the textbook has enormous authority and forces teachers to follow it without any flexibility. Therefore, the only way is for teachers to teach the textbook page by page. Currently the textbook represents all of the education and curriculum in Myanmar.

This type of educational practice is concerned with how many facts or how much knowledge children memorize. The more knowledge a child memorizes, the more successful the education is. Therefore, the teachers evaluate whether children have memorized exactly the content of the textbooks as much as possible. Behind such educational practice, a strong philosophy lies: knowledge is permanent and unchangeable, and it is useful whenever. As we know, this idea of ***perennialism*** dominated the field of education up to the late nineteen century. The perennialst thinking lays much stress on the learning result or *how much knowledge is gained through learning*, but concerns little about the process of learning or *how children learn*. This way of thinking is contrary to the child-centered approach (CCA). Although some enthusiastic teachers have started to observe children's learning process more carefully, the common educational practice of Myanmar is still bound by perennialism.

Myanmar's educational approach

The current curriculum of Myanmar seems to have been influenced strongly by educational theories that were introduced in 1990 as the part of "*Mya/90/005"* project, sponsored by UNDP. The structured framework of lesson plans was also introduced in this project. Since then, all lesson plans have followed this framework. Therefore, the project, *Mya/90/005*, has had a great impact on Myanmar's education.

According to the current teacher's manuals, the lesson plan format consists of the following five items:

- ✧ Key concept,
- ✧ Learning objectives (General and specific objectives),
- ✧ Teaching/learning materials,
- ✧ Learning activities, and
- ✧ Achievement test.

The learning objectives are specifically described with using behavioral terms, such as "write," "tell," and "explain." Various learning activities are prepared based on the objectives. The achievement test is also designed in line with the learning objectives and activities, such as "Let children write ...," and "Let children explain ..." As we knows, this educational approach is called ***behavioral approach***. The concept of the behavioral approach is that the result of learning is the behavioral changes of learners. As long as teachers provide children with some adequate input, children's behavior will be visibly changed as the effect of learning. Therefore, teachers can observe the changes in children's behavior and evaluate them. Although the behavioral approach has been criticized strongly by educators and researchers who advocate the cognitive-developmental learning theory, it is still used widely in the field of education in various countries because it is systematic, logical and easy to understand. Myanmar is one of those countries.

Here, we must think about the following two issues that may cause problems with the introduction of CCA:

- ✧ Whether or not the behavioral approach has been effectively used in the current educational practice, and
- ✧ Whether or not the behavioral approach matches with CCA

The first issue is significantly important from the educational development point of view because the behavioral approach is the first approach to have viewed education as science. In spite of strong criticism of the behavioral approach, understanding this approach may provide us with scientific and logical process of education and help us understand the recent approach or *the cognitive developmental learning* more deeply. In Myanmar education, the behavioral approach is unfortunately not used effectively. For example, the number of inputs that promote changes of children's behavior are insufficient and ineffective. Little concern about the *presage and context variables*[1] makes the approach difficult to implement. The reasons are dominant teaching practice based on rote-learning and the idea about the universality of single content and practice. In other words, Myanmar's education is not free from the perennialist thinking. Avoiding this way of thinking can solve the problem.

The second issue is also crucial to introducing CCA in this country. Whether or not the behavioral approach matches with CCA has been clarified by the recent development of psychology, especially research on learner's cognitive development through learning. According to the cognitive developementalist, the result of learning is to integrate new knowledge with prior knowledge and to widen the knowledge network of learners. The changes of behavior and attitude are a part of the learning result. One of the pillars of CCA is ***scientific inquiry***. We must adopt the idea of the cognitive developmental learning prior to the introduction of CCA. At that time, we must also understand the dysfunction of the behavioral approach under CCA.

[1] Refer to the "Behavioral Model of Teaching Practice" in Chapter 2

As a result, Myanmar's education is facing two difficult obstacles in order to introduce CCA into educational practice. First, teachers and educators must avoid perennialistic thinking and try to understand the behavioral approach which is taken in the current teacher's manuals. Then, they must realize the dysfunction of the behavioral approach under CCA. Thirdly, they must understand the cognitive developmental learning theory and adopt when using CCA.

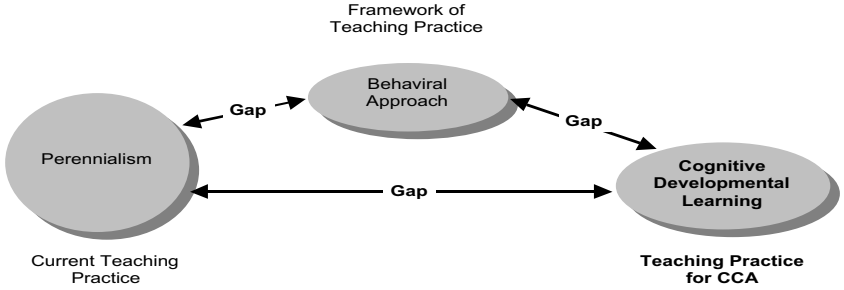


Figure 5-1 Gaps Among Three Practices

5.2 Issues of Teaching Practice

Myanmar's teaching model

The current teaching model of Myanmar that is widely accepted is the ***systematic model of teaching***[2], developed by V. Gerlach and D. Ely. This teaching model is useful and gives us a lot of meaningful information about teaching practice. However, the real teaching practice in Myanmar does not follow this model. There is a huge gap between the reality and the model.

Prior to discussing this gap, it is necessary to understand thoroughly the systematic model of teaching. This model originated from the idea of ***instructional technology***. The aim of instructional technology is to improve the educational efficiency of teaching and learning through technological approaches. The traditional idea is that "teaching" is a series of activities with the aim of changing a learner's attitude and behavior. Whether or not this change was accomplished is not the main point. The main point is that the teacher intended to change learner's attitude and behavior despite the results. On the other hand, the instructional technology views that the main purpose of "teaching" is to create changes in the learner's attitude and behavior. If these changes are not accomplished, the "teaching" was not successful. In this view, "teaching" occurs only when the changes of learner's attitude and behavior has taken place. According to the instructional technology, if learner's attitude and behavior did not changed, the blame is on the teachers. Therefore, the teaching model under the instructional technology always includes both evaluations of learner's performance and teaching process.

Knowing the philosophy of instructional technology, we understand the systematic model of

[2] This teaching model was introduced in Myanmar through the "Training workshop for Myanmar core trainers" held in 1990s, sponsored by UNICEF.

teaching more clearly. First, teachers specify objectives and select content based on the objectives. Second, teachers assess entering behavior of children. Third, teachers consider teaching strategies, organize children into groups and allocate time and learning space. In addition, teachers select the most appropriate resources or teaching materials. After lessons were conducted, teachers evaluate children's performance and their teaching procedure. This evaluation data will go back to the objectives both by teachers and children in order to improve the original teaching procedure.

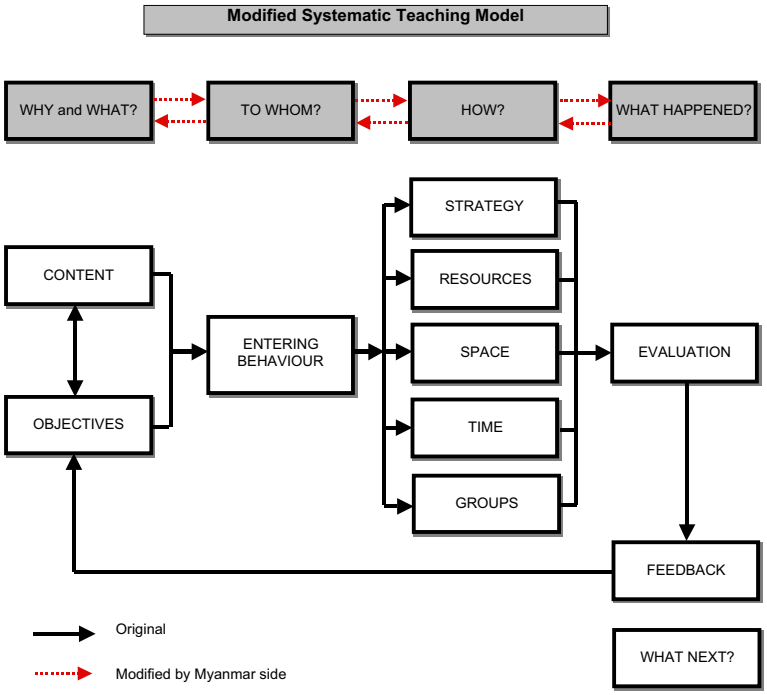


Figure 5-2 Currently Accepted Teaching Model of Myanmar

The gap between the real teaching practice and this model is in the "evaluation" and "feedback" phase. "Is evaluation conducted to review children's performance and teaching process?" "Is feedback influencing the objectives and the content?" The answer to both questions is unfortunately "no." In the current teaching practice of Myanmar, evaluation focuses only on children's performance by using test scores. It is never used for revising the teaching process. This is a crucial problem in Myanmar's education which adopts the systematic model of teaching. In addition, Myanmar's education is highly centralized and nationalized. Individual educators and teachers must follow the central decisions about the direction. There is no opportunity for teachers to revise objectives and contents based on evaluation. If all educators and teachers are allowed to follow this teaching model, it means that they can change objectives and teaching contents by themselves[3]. Although this teaching model may be

[3] In most western countries, teaching is implemented under the teacher' responsibility. Teachers can create the most appropriate objectives and contents based on children's level of understanding and learning situations. Even in Japan, where the educational is centralized, teaching practices in the

beneficial to promote CCA[4], the real teaching practice does not follow this model. This is also another crucial problem of Myanmar's teaching practice.

*Note: In the **Figure 5-2**, there are many arrows shown by broken lines. These arrows do not exist in the original model, but was added by the Myanmar side. These arrows are not appropriate because these do not correspond with the systematic teaching process.*

Teacher's view of children

In the current education system of Myanmar, teachers always conduct lessons in the form of lectures. During lessons, teachers are always talking to a group of children, not to an individual child. Teachers always treat children as a group, not as individuals. In this respect, teachers do not pay careful attention to an individual child. In such a class, there is only a relationship between the teacher and a group of children. This kind of teacher's attitude may come from the fact that they always think about lessons from their own point of view and they never think about their lessons from the children's point of view. Although a lesson may be based on the relation between one teacher and many children from teacher's point of view, it is based on multiple relationships between each child and a teacher from the child's point of view. Therefore, it is difficult for Myanmar teachers to realize what each individual child is doing and what he or she is thinking about during lessons.

As discussed before, CCA requires teachers to pay much attention to an individual child and respect them as an individual. During lesson activities, teachers must observe each child carefully to check what children are thinking about and how they are feeling. In this respect, teachers are viewing a child not as a part of the group, but as a precious individual. This idea is in line with the philosophy which highly respects individuals. Under this philosophy, for example, in many western countries, a teacher memorizes children's names as soon as possible at the very beginning of academic year and always calls them by name not only during lessons but also at any other times. This is a significant sign that a teacher views each child as an individual. In CCA, this kind of attitude is fundamental.

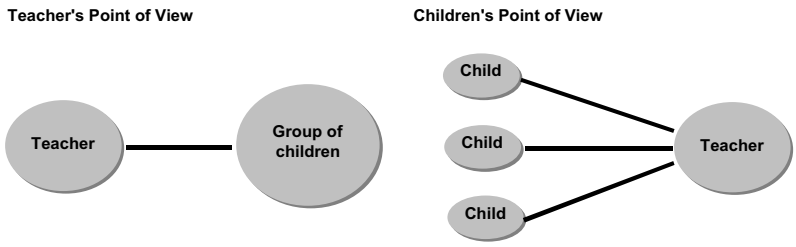


Figure 5-3 Different Relations in the Class

classroom level are significantly flexible and can be conducted under individual teacher's responsibility. In such environment, this teaching model can work well.

[4] Generally speaking, CCA lays much stress on children's learning. Children's level of understanding and learning condition are usually different from school to school and from place to place. To conduct CCA effectively, it is better that the teaching procedure including objectives and content is revised to meet their environment.

5.3 Assessment Issues

Myanmar's evaluation system: chapter-end test and CPR

The evaluation system in primary education was considerably revised in AY 1998/99. Before AY 1998/1999, the evaluation was based on written tests that were held only at the end of the academic year. Since the revision, the evaluation of children's learning has been conducted with using more variety of data of children. Currently the chapter-end test and the comprehensive personal record (CPR) have being used nationwide for evaluating children's performance. The chapter-end test is a teacher-made test which individual teachers can create based on the instructions in the teacher's manual. This test is usually in written-form and is conducted within the time limitation of 30 (for the lower primary level) or 35 (for the upper primary level) minutes for each test. According to the teacher's manual, the chapter-end test is held seven times a year: once in June or July and once every month from August to January. The results of these tests are usually shown a child's rank among classmates such as 1st, 2nd, 3rd ……50th, etc[5]. In addition, it is common in Myanmar's schools for the teacher to announce the children who got the highest scores on the test. The types of the questions in the chapter-end test are mostly recall and recognition types. Simple-recall and completion questions are widely used. Most questions used in the chapter-end test rigidly follow the assessment instructions in the teacher's manual. Therefore, the chapter-end test is just checking children's level of knowledge or how many facts they memorized.

The result of the test is recorded month by month on the monthly report card seen below and is send to parents.

MONTHLY REPORT CARD

Name: Upper Primary Level (G3 & G4) Grade:

Month	Myanmar	English	Maths	Basic Science	Social Studies	Total	Grade	Signiture of Class Teacher and Date	Signiture of Parents and Guardian and Date	Signiture of Principal and Date
June										
July										
August										
September										
October										
November										
December										
January										
February										
Total Score										
Total Score of Year (Ave.) / Grade										

Remarks of Class Teacher _____ Remarks of Principal _____

Signiture of Class Teacher _____ Signiture of Principal _____

Figure 5-4 Form Showing Result of the Test (Front page of Monthly Report Card)

[5] In some schools, the result of the test is shown by A, B, C and D. However, most parents highly concern about the rank of their children in the class and in the school. Therefore, most schools show the result of the chapter-end test by using their rank in the class.

The comprehensive personal record (CPR) is also used as an evaluation tool. This evaluates children's daily performance such as school attendance, whether a child follows school rules and regulations, whether he/she assists the teacher and school, whether he/she is engaged in gardening and growing plants, whether he/she helps parents, whether he/she practices personal hygiene, whether he/she takes chapter-end test regularly, whether he/she participates in literature, fine arts and music, and whether he/she participates in sports and physical activities. Teachers observe children individually to describe children's performance about the above points of view[6]. The result of CPR is usually shown by A, B, C and D on the report card which is sent to parents with the result of the chapter-end test.

Record to Evaluate the Participation in Monthly School Activities

Month	Attendance (75%)	Abiding by school rules and regulations	Assisting teacher and school	Gardening and growing flowers	Helping parents	Personal Hygeine	Taking chapter-end tests regularly or not	Participation in literature, fine arts and music	Sports and physical activities	Signiture of class teacher and date	Signiture of parents and guardian and date	Signiture of principal and date
June												
July												
August												
September												
October												
November												
December												
January												
February												
Total attendance and Grade / Grade (Ave.)												

Figure 5-5 Form Showing Result of the CPR (Back page of Monthly Report Card)

Myanmar's evaluation philosophy

In spite of significant improvement of the evaluation system since its revision, there are still some issues that need to be carefully concerned. The current evaluation system of Myanmar is strongly influenced by the theory of ***psychometrics***. The impact of psychometrics goes beyond the specifics of item design and test construction to a broader range of implications. The emphasis of the current evaluation is on ranking children by score and on children's level of knowledge which can be easily replaced into quantitative data rather than children's real competence. Therefore, the evaluation does not describe what children accomplished through learning, but it can describe only in what position each child is relative to their peers.

This evaluation has had a significant negative impact on children and teachers. Children do not willingly participate in group-work and peer-work because the assessment concern less about group performance rather than individual performance. In addition, it can discourage

[6] To evaluate children's daily performance correctly, the instructional booklet of CPR was published by DEPT.

children from helping each other because they are always facing severe competition with their classmates. Furthermore, most children are scared of tests and this feeling can develop negatively into a dislike of study. In terms of teachers, they strongly believe that the most useful form of information is taken from the comparison between individuals or groups. As a result, comparisons are often used to distinguish between children rather than specific key items being assessed. Moreover, teachers tend to believe that children at the bottom cannot learn as much as others because they are well below average[7].

From a CCA point of view, psychometrics is a huge obstacle. CCA does not focus on how much knowledge children memorize, but concerns more about how children think about a certain issue. The traditional psychometrics does not take this point into consideration. Therefore, as long as the psychometrics is dominant in the field of evaluation, the impact of CCA on education cannot be seen clearly.

Myanmar's learning model for evaluation

The current evaluation system used in Myanmar focuses only on measuring discrete knowledge and skills of children. This is because the education in Myanmar is strongly influenced by the traditional learning model or the ***building block model***. For example, in the current chapter-end test, the recall and recognition types of questions are often used. These forms of question can measure level of knowledge or how many facts children memorized, but they cannot go beyond it. No question takes, for example, the form of the problem-situation type, which can measure thinking and analytical skills of children: how children think about a certain issue and how they solve a problem. In the case of geography (Social Studies), the chapter-end test asks only discrete facts separately such as the names of states and divisions, topographical features, agricultural products, and the situation of transportation and communication of each state and division. Even if children memorize these individual facts as much as possible, children would not understand the geography of Myanmar. The reason is that such discrete facts does not tell us how the states and divisions cooperate and how each factor (topographical features, agricultural products, transportation and communication) is related to each other. Therefore, to conduct effective assessment that covers not only discrete knowledge and skills but also thinking and analytical skills, the traditional idea about learning (building block model) should be changed.

The purpose of Myanmar's evaluation

Evaluation in Myanmar seems to have only a single purpose: to clarify individual child's rank among the group. This view may make evaluation inflexible. According to the latest assessment theory[8], assessment is clearly divided into two groups according to its purpose: ***accountability-purposed assessment*** and ***classroom-based assessment***. The accountability-purposed assessment is one used for certification and selection purposes. The *matriculation*

[7] Such a child is often called a "slow learner," which is an important issue in Myanmar education.

[8] R. J. Stiggins is one of the most famous educators who pointed out the need of classification of assessment by its purpose. Stiggins. R.J. (1992) "Tow disciplines of educational assessment," paper presented at ECS Assessment Conference June 1992, Boulder, Colorado. In press: *Measurement and Evaluation in Counseling and Development.*

test and various entrance exams for higher education are good examples of it. Because such tests are widely conducted area- or nationwide involving many students for selection purpose, the comparability and objectivity of assessment are highly important. On the other hand, the classroom-based assessment is one for recognition of children's cognitive level. The main purpose of this assessment is to give children and teachers useful feedback for improving their learning and teaching. It is important for education to use the two assessments effectively.

Current education in Myanmar, however, lacks the idea of classroom-based assessment. Most educators and teachers seem to think about assessment only as the accountability-purposed assessment. Therefore, the assessment is always considered to be high-stakes and the result has a great authority over children. The current assessment often gives children only the result of learning in the form of a score or rank among the group. It does not give children meaningful information for their learning. Although children who can get higher scores will be happy, most children may be scared of the chapter-end test and be discouraged to learn. Myanmar education must understand the necessity of different types of the assessment rather than relying on one type of assessment. It is significantly important for Myanmar's education to adopt the idea of classroom-based assessment, which is supported by R.J. Stiggins, or formative assessment which is supported by M. Scriven.

Issue of "*slow learner*"

As touched upon previously, the issue of a "*slow learner*" is a major topic in Myanmar education. However, from the CCA point of view, this issue is not a serious problem. Before discussing the issue of the *slow learner*, we must think about one important question: "Why are there *slow learners*?" Most teachers in Myanmar may answer, "Some children are not clever enough and they cannot learn the same as ordinary children can." As you remember, this is the same view of the psychometrics. In the theory of the psychometrics, teachers view children in class as a group, not as a gathering of individuals. Teachers are concerned mainly with what level a group achieves, not about what individuals accomplished. Based on their scores, teachers put children in a normal curve. Then, teachers judge children at the top as *fast learners* and children at the bottom as *slow learners*. This way of thinking emphasizes only on the relative position of children and does not consider children's real competence.

CCA was originally designed by J. Dewey to help children who were not interested in studying. How to motivate these children to study and how to make them understand the delights of learning are the central issues of CCA. From the CCA point of view, children are the main actors in lessons. They should be seen as precious individuals, not as a small component of the group. CCA is based on the idea that children are not all the same and do not have the same characteristics and abilities. According to this idea, even children who are unfortunately labeled as *slow learners* under the current teaching practice may have immense capability and competence. All failures are the teacher's fault in the CCA point of view: a teacher does not have enough qualifications to teach or the teaching process used was not effective.

CCA focuses on individual accomplishment in consideration with individual differences and unique personalities. CCA also prepares various ways in order to achieve the educational goal.

In this respect, it is impossible that *slow learner* appear. Every child, as long as they do not have physically and mentally disabilities, can accomplish something through his/her learning. Teachers should not label a child as *slow learner.*

5.4 CCA in Myanmar Context

Education is directly related to the national policy, culture and tradition. They all have strong influences on education. Therefore, education which is used under one environment cannot be transferred to another environment in the same form. It is significantly important to modify it into the most suitable form. Therefore, MBESS has developed ***CCA in the Myanmar context*** based on Myanmar's own unique situation. During the development work, there were three crucial obstacles: Myanmar's educational theory, teaching practice, and the current curriculum. MBESS has overcome these issues and successfully developed the most appropriate CCA for the current Myanmar's educational situation.

So, what is CCA in the Myanmar context? The basis of the MBESS Teacher's Guides is to be based on the current textbooks (This is the requirement by the Government of Myanmar). Therefore, the following limitations exist:

- The current concept of each topic should remain,
- The current objectives basically remain with minor changes and some additions,
- Action verbs are used in the specific objectives, and
- The current contents of each topic remain.

In spite of these limitations, MBESS has conducted bold innovations. In the current education, many teachers tell (not teach) children about facts in the textbooks directly without clear explanations. Therefore, children always memorize it without understanding. In this practice, information is only superficially transferred from the teacher to children. The information cannot take root as knowledge in children's mind and it may be forgotten easily.

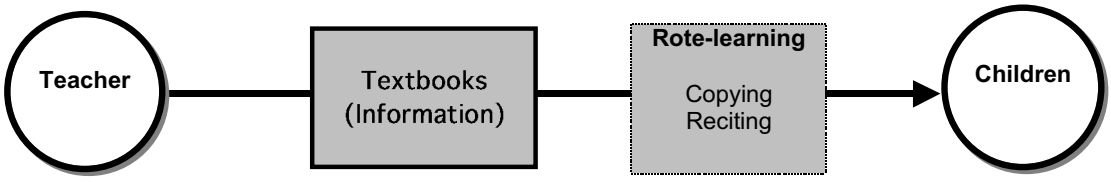


Figure 5-6 Current Teaching Practice

To overcome this practice, MBESS has developed a totally different approach. First, the main concept is taken out from the textbooks and is combined with children's previous knowledge

and daily experiences[9]. For example, in the current curriculum, when a teacher teaches the topic of "clothes," he or she starts with classifications of clothes such as those made from plants, animals or man-made substances. This activity may not be related to children's daily experiences. Instead, the new approach concerns about the real meaning or concept of this activity, "letting children understand the different functions of clothes." It starts with the discussion of "why do we have and wear various different clothes?" This discussion is directly related to children's everyday lives. Children can discuss this issue using their prior knowledge and experiences.

Secondly, children's psychological development is carefully considered during the process of combining the main concept with children's prior knowledge and experiences. "How should a teacher introduce the issue?" is of vital concern in the new approach. The way of dealing with the main concept is decided depending upon children's understanding level about their environment.

Thirdly, in the teaching/learning process of the new approach, we attach great importance to the problem-solving learning method. Although the problem-solving learning method cannot be perfectly implemented with the current limitations of Myanmar's education system, the important steps of the problem-solving leaning method can be used as follows: (1) Awareness of difficulties, (2) Identification of the problems, (3) Classification of data and formulation of hypotheses, (4) Acceptance or rejection of the hypotheses, and (5) Formulation of conclusions. To implement these five important steps, various different activities such as observation, interviewing, group discussion, group projects, field trip and games are effectively introduced in the teaching/learning process.

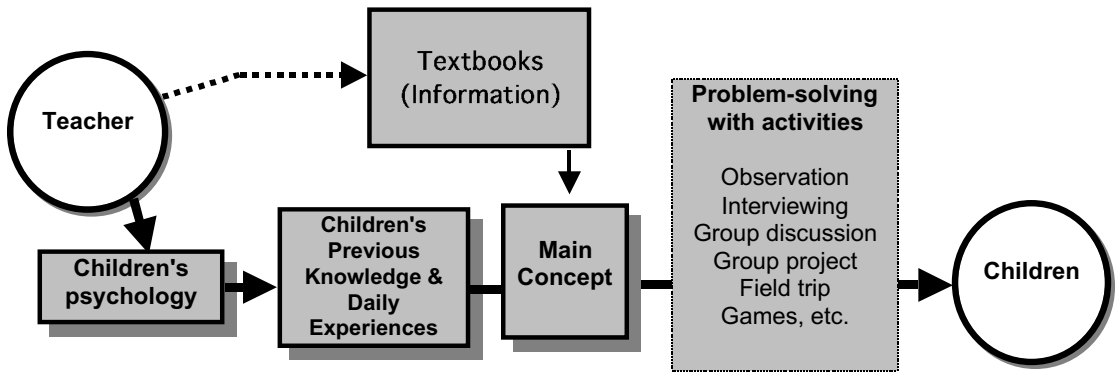


Figure 5-7 CCA Developed by MBESS

[9] The original idea of Dewey (child-centered education) is that education should start with children's previous knowledge and daily experiences and the educational contents should be arranged based on these. However, the approach taken by MBESS is that the existing contents of the textbooks are combined with children's experiences. This is a significant difference from the original CCA.

The teaching/learning process, especially for children at the lower primary level, is formulated while paying close attention to children's psychological development. Based on the idea that children learn through the senses rather than with words and that they learn effectively only in the atmosphere that provides them with emotional security, trust, and affection[10]., we often use auditory and visual materials in the teaching/learning process. We also use various useful materials, songs, stories, colorful materials and games. This is also based on the psychological thought that learning should be based on the children's self-activities and self-development and that effective learning occur when children are allowed to manipulate objects (sphere, cubes, and circles), shape and construct materials (clay, sand, and cardboard), and engage in playful activities (building houses and mountains, run and exercise)[11].

Through this process of learning, the information which a teacher teaches can be transferred to children and can take root in children's minds as useful knowledge. Such knowledge is not easily forgotten and can be applied to different situations. Unlike the traditional teaching practice, the new approach can develop children's various abilities because it deals effectively with the three domains of educational objectives; cognitive, affective and psychomotor.

CCA in the Myanmar context is likely to be misunderstood by local educators and teachers because the current textbooks are based on the traditional way of teaching. Those educators and teachers are likely to focus only on the methodological aspect of "how to teach," and not on the contents or "what to teach," as Japan did in the 1950s. As showed in **Figure 5-8**, teachers tend to manipulate various activities to teach the contents of the current textbooks without careful concern about children's psychological development and their previous knowledge and daily experiences. Basically this practice is not different from the current educational practice. If such a practice were to spread nationwide, the education of Myanmar would have no improvement or even become worse. In this respect, "CCA in the current Myanmar context" is still the interim style, which is fragile and does not yet have a solid foundation.

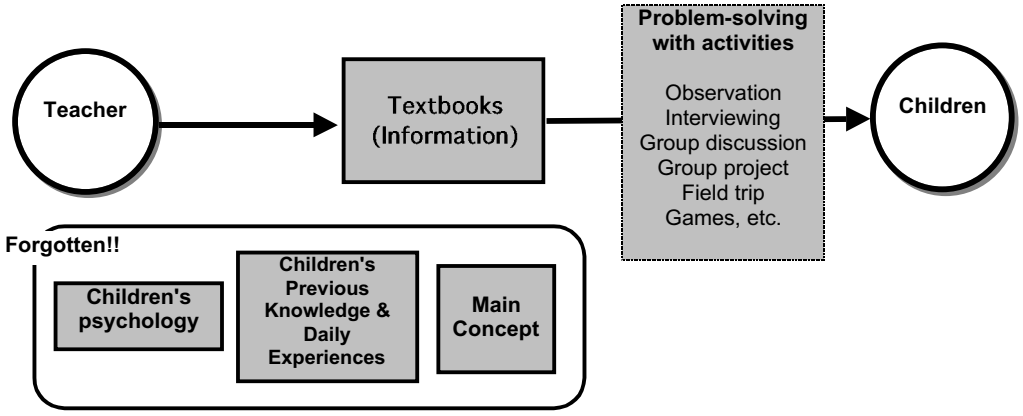


Figure 5-8 Possible Case of Misleading of CCA

[10] This idea about children came from Heinrich Pestalozzi (1746-1827, Swiss).
[11] This idea came from Friedrich Froebel (1782-1852, German).

5.5 Recommendations for Future Improvement of Myanmar Education

As discussed above, there are many issues to be concerned about in order to improve Myanmar's education. Here MBESS focuses mainly on the issues related to CCA, especially actions necessary to disseminate the concept of CCA nationwide on the basis of the MBESS Teacher's Guides. MBESS proposes the following recommendations:

Recommendation 1:
It is very necessary to improve the current textbooks based on CCA.

The current textbooks are not based on CCA. Teachers have neither quality training nor enough information on CCA. They have only a smattering of CCA knowledge from listening to their colleagues. Under this situation, it often happens that teachers misunderstand the concept of CCA and implement CCA lessons incorrectly. According to MBESS research, this situation has occurred in many schools. Most teachers misunderstand that if children have some activities during the class, it is a CCA lesson.

Under the current situation, children are still devoting themselves to memorizing textbooks even in classes which teachers are supposedly conducting CCA lessons. Their parents also back this learning practice for their children because both children and parents think the textbooks are the main base of education.

MBESS Teacher's Guides will be the only completed CCA based practical materials currently in Myanmar's education system. However, the Teacher's Guides can be accessed only by a limited number of teachers because of the limited number of distributed copies. In addition, children still use only the conventional textbooks and their parents think education should be based on these old textbooks. In this situation, there may be the following difficulties:

- Teachers will not understand the concept of CCA correctly or misunderstand it,
- Children and parents will keep the traditional learning style.

MBESS agrees that the most effective way to avoid these problems is to improve the current textbooks. The new textbooks should be written based on the concept of CCA and the results of the most current research in the field of Child Psychology. The impact of textbook is enormous because not only children but also parents and communities have access to it. Unlike teacher's guides which only teachers can see, textbooks can be accessed by more people and are paid much more attention to by society. Therefore, the production and nationwide distribution of textbooks, student books, or workbooks based on CCA is of great urgency. These books with MBESS Teacher's Guides will bring about bigger and faster impact on Myanmar education.

MBESS highly expects the future great efforts of Ministry of Education in Myanmar.

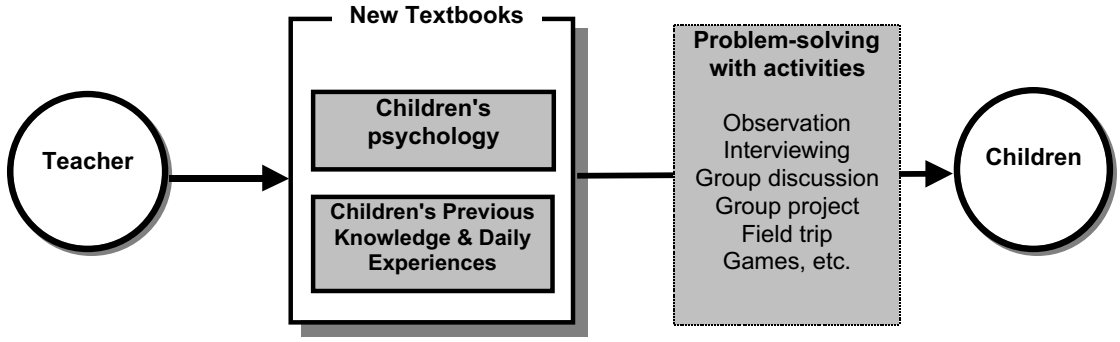


Figure 5-9 Expected Example of CCA

Recommendation 2:

It is very necessary to produce textbooks for Moral & Civics and Lifeskills.

Currently Moral & Civics and Lifeskills are taught from KG to G4. However, there are no formal textbooks for these subjects. Although the current teacher's manuals includes teaching instructions for these subjects, many teachers in rural areas do not know these subjects because of the limited availability of these manuals. Therefore, significantly large number of the schools in the rural area have never taught these subjects.

Moral & Civics and Lifeskills are important subjects in Myanmar because they deal with the tradition and heritage of Myanmar and useful skills for everyday life. To teach these subjects effectively and efficiently, textbooks are highly necessary. Children can learn many things from textbooks. Providing good textbooks can motivate children to study and stimulate self-studying.

In the future, MBESS expects great efforts from the Ministry of Education in Myanmar on this issue.

Recommendation 3:

It is very necessary to change the current assessment system.

The current assessment system in Myanmar heavily relies on written tests which check only how many facts children memorize. As long as Myanmar keeps this assessment, the effects of CCA will not be seen. CCA promotes children's thinking and creativity, but the current assessment does not cover this point. As discussed in **Chapter 9**, many teachers in Yankin Education College Practicing School (YECPS) said, "In terms of academic achievement, there was no clear difference between children in the experimental classes and in the control class, because we measure children's achievement only by *chapter-end tests* (or written tests checking only children's level of memorization), which do not cover their thinking process and level of understanding."

Although MBESS does not oppose chapter-end tests, it is necessary to modify and improve the assessment system so that it can cover children's level of understanding and thinking process as well as their amount of knowledge. Improvement of the quality and style of questions in current written tests needs to be done. More variety of methods such as observation, writing an essay, self-assessment and peer-assessment is also needed. In addition, teachers must use the results of assessment as feedback for children so they can improve their learning. It should not be used as a ranking of children comparing one child to another.

Recommendation 4:
It is very necessary to train primary teachers intensively.

CCA is a deep concept. As mentioned above, CCA is not only lessons with activities which many teachers in Myanmar currently misunderstand. To spread the concept of CCA and implement CCA lessons correctly nationwide, teacher's training is highly necessary. Although MBESS Teacher's Guides include enough information on CCA for teachers, a firsthand explanation is significantly necessary for them. This is because CCA requires many aspects to be concerned such as children's prior knowledge, experiences, interests, and feelings, which are not currently concerned about in Myanmar education. This knowledge cannot be transferred to teachers who have no CCA background only by reading the Teacher's Guides.

MBESS created a handful of capable resource teachers for CCA. Through cooperation with those resource teachers, training for primary teachers must be implemented prior to the dissemination of CCA.

Recommendation 5:
It is very necessary to upgrade the education system and quality of teachers in education colleges.

Pre-service and in-service education is also one of the most important factors to disseminate CCA as well as to improve Myanmar's education. Education colleges produce new teachers every year. If these new teachers do not have enough qualifications to implement CCA, CCA cannot be promoted nationwide and education cannot be improved. Therefore, the education colleges have a significantly important role.

Unfortunately, current education colleges do not provide students with a quality education because of the inefficient and inadequate educational system and low motivation and quality of teacher educators. The curriculum which is widely used in all of the education colleges in Myanmar have crucial problems, such as using old-fashioned educational theory, lack of updated educational psychology, inadequate teaching and learning model, etc. These problems will become huge obstacles for dissemination of CCA and to improve Myanmar's education.

MBESS highly recommends an immediate action to upgrade education colleges, including the following points.

- Revising the curriculum of education colleges,
- Revising the textbooks using updated educational theory, and
- Training teacher educators to help them upgrade their knowledge and skills.

CHAPTER 6
BASIC CONCEPT OF TEACHER'S GUIDES

6.1 Issues to be Improved in the Current Textbooks and Teacher's Manuals

Learning objectives

Objectives of subject: The current teacher's manuals state the objectives of the subjects. These objectives are too simple and are written with only 10 to 20 words each. Each subject has three to five objectives each of which covers a field of study in the subject for all the grades taught. General Studies, for example, consists of three fields of study such as *Natural Science, Moral and Civics* and *Lifeskills* and has only three objectives, each of which is corresponding to one field of study and covers KG, G1 and G2.

Example of General Studies

(a) Be able to make investigations in the events and occurrences found in the natural environment. → *Natural Science*

(b) To become cultured, gentle and dutiful good citizens and to be morally good. → *Moral & Civics*

(c) To be able to live in harmony with the environment and to get the fundamental skills and good practices needed for the whole life. → *Lifeskills*

Objectives of each topic: The objectives of each topic, or learning objectives, consist of three to five objectives depending upon topics. These objectives are usually written with only 5 to 10 words and are too simple to cover the key concept of topic contents. For example, there is a topic teaching "Family." In this topic, the key concept is the importance of family and cooperation among family members. However, one of the learning objectives is that children are able to describe the names of family members. The description of the names of family members is not the final goal for this topic, but only a part of teaching process in this topic.

In addition, these objectives focus only on children's knowledge level (or the most basic part of the cognitive domain, according to B. Bloom). They do not pay attention to children's attitude and feeling (or the affective domain), and skills and technique (or the psychomotor domain). Learning objectives should include these three domains. However, MBESS thinks that the step-by-step approach, described by B. Bloom, does not necessarily have to be taken when learning objectives are created. MBESS takes J. Bruner's position, which is the cognitive development approach. According to him, it is possible to teach any kinds of subjects to all children in the manner of keeping academic characteristic. This means that children's cognition does not follow the steps described by B. Bloom. All competence, gaining knowledge, comprehension, application, analysis, synthesis and evaluation, can occur at the same time.

Moreover, the learning objectives are required to be written using "action verbs" such as "tell,"

"describe" and "explain." This idea is based on the *behavioral approach*. Behaviorists today admit that human actions show only a part of human behavior. Therefore, objectives with "action verbs" limit our educational view. By using "action verbs," we completely miss children's affective and psychomotor aspects in educational objectives.

Recommendation:

- **The objectives of each subject should be described more specifically with careful concern about children's psychological development.**

  The objectives of each subject should be described more specifically and should concern the goal and aim of the subject matter. In addition, the grade-wise objectives should be created based on the children's psychological development and children's understanding level of the subject matter.

- **All the objectives should be created with a great concern about children's expected attitude, behavior (or the affective domain), skills and technique (or the psychomotor domain) as well as children's knowledge level (or the cognitive domain).**

  Any educational practice involves children's cognitive aspect, affective aspect and psychomotor aspects. Therefore, good educational objectives always state clearly the expected developmental stage of children in these three aspects. The objectives should be created concerning these three domains.

Structure of contents

The current textbooks consist of various topics. The number of topics is significantly large. For example, General Studies in KG consists of 27 topics, one in G1 has 26 topics, and one in G2 has 29 topics. Basic Science in G3 consists of 16 topics, and 13 topics in G4. In Social Studies, there are 33 topics in G3 and 39 topics in G4. One of the reasons why many topics are in the textbooks is less concern about the contents. The topics are only listed up randomly without any categorizations. The example of Moral & Civics at G2 (General Studies) is listed below:

Topic 1: Mingala poems,
Topic 2: National spirit and patriotism,
Topic 3: Morals,
Topic 4: Culture,
Topic 5: Duty,
Topic 6: The practice of culture, and
Topic 7: Stories

Looking at the titles of the topic, it is difficult to see the relationship among the topics. It is not possible to find a clear relation between topics 1 and 2, between topics 2 and 3, between topics 3 and 4, etc. This random arrangement often causes overlapping and repetitive contents. In

addition, this arrangement completely loses sequence and continuity that is vital for curriculum. This makes the educational goals and aims unclear.

Recommendation:

- **The topics should be structured by grouping some topics which are related to each other.**

  The organization of the topics should be created using such units as topic (or lesson), chapter, section, part, etc. To do it, it is necessary to review carefully the contents of each topic again, to categorize them and to arrange them.

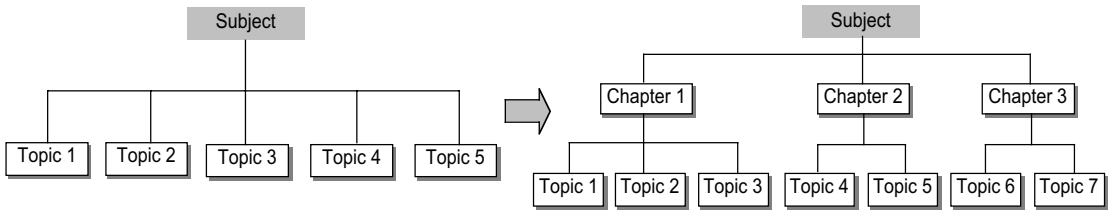


Figure 6-1 Current Structure of the Contents and Suggested Structure

Time allocation for teaching

The Teacher's Manuals clearly mention allocated time periods for each topic. This allocation of time seems have been decided without concerning the contents of the topics. For example, Social Studies has 288 periods per year at G3. One hundred forty four periods are allocated for geography and history, and 72 periods each are allocated for moral & civics and lifeskills. There are 19 topics in geographical and historical fields of study and six periods are allocated for the instruction of each topic. The remaining 30 periods are used for revision.

Recommendation:

- **Depending upon the importance and difficulty of the topic content, time allocation for topics should be changed.**

  It is highly recommended that the difficult level of contents should be reviewed carefully and different amount of time should be allocated depending upon the contents.

Learning activities

"Learning activities" in the current Teacher's Manuals has two crucial problems. One is that the current manual does not instruct how to conduct lessons. Another problem is the way of using these learning activities. First, let's discuss the former problem. Lesson procedure is important in order to conduct lessons effectively. A good lesson is usually divided into three

main parts such as introduction, body, and conclusion. In the introduction part, a teacher makes his or her best effort to motivate children by using various methods. In the body part, the teacher uses the most effective learning activities to let children understand the issues. In the conclusion, the teacher confirms children's level of understanding by using various ways such as presentation, writing an essay, and verbal communication. However, the current Teacher's Manuals do not mention this lesson procedure mentioning only learning activities. For example, "Task (1): Describe three plants that grow on land," "Task (2): Describe three plants that grow in water," etc (The case of Natural Science at grade 2). The learning activities are only a part of the lesson process and do not instruct how to conduct lessons. As a result, most teachers in Myanmar cannot implement lessons effectively and smoothly.

In terms of the second problem, the current learning activities seem to be used for checking children's knowledge. For example, the above task (1) requires children to describe three plants that grow on land. To complete this task, children have to know three plants that grow on land prior to starting this activity. In this respect, a teacher first should teach three plants that grow on land and then children can do this activity. Therefore, the learning activities in the current Teacher's Manuals are not "learning" activities, but activities "for confirmation." Learning activities usually mean the activities through which children find something new.

Recommendation:

- **Lesson procedures should be clearly explained, since this is the biggest weakpoint for Myanmar teachers (1): Linking the contents with children's prior knowledge and daily experiences.**

  Lesson procedure is vital for CCA. For starting CCA lessons, it is highly necessary to link the teaching contents with children's prior knowledge and daily experiences. Children identify problems during the learning process, and try to solve the problems by using various ways such as observation, discussion, interviewing and field trips. However, the task of linking the teaching contents with children's prior knowledge and daily experiences is not easy. In addition, the concept of this task is also easily misunderstood.

  Children usually experience many things at their home and in their limited interactions with people and their parents. They gain a large amount of knowledge through their various experiences. However, their knowledge is not necessarily correct. For example, most children who have seen a world map may believe that there are clear drawn boundaries between countries. In addition, once crossing a borderline, they can see a complete different scenery from one country to the other. For another example, many children believe that a stone falls faster than a piece of paper because a stone is heavier than paper. These prior knowledge and experiences are wrong. But many children and sometimes adult strongly believe such things. Breaking such incomplete prior knowledge is the purpose of education. Therefore, teachers must think carefully about children's incomplete prior knowledge and link it with the contents of what they intend to

teach.

- **Lesson procedure should be clearly explained, since this is the biggest weakpoint for Myanmar teachers (2): How to use learning activities effectively.**

  CCA lessons usually use the problem solving method. The problem solving method takes the following steps: (1) Awareness of difficulties, (2) Identification of the problems, (3) Classification of data and formulation of hypotheses, (4) Acceptance or rejection of the hypotheses, and (5) Formulation of conclusions. To formulate conclusions, the problem solving method requires various positive activities such as observation, discussion, group research, interviewing, field trips, experiments, etc. These learning activities take place in Steps 4 and 5. Through these activities, children can find solutions.

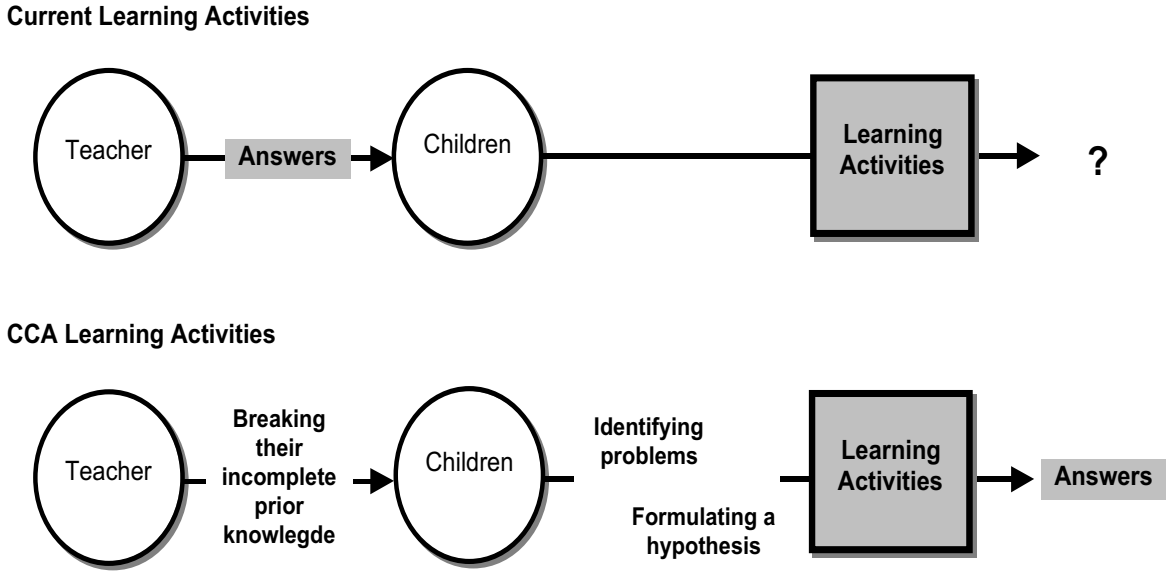


Figure 6-2 Current Learning Activities and CCA Learning Activities

Assessment

The purpose of assessment in school, especially at the primary level of education, is to support children's learning, not to rank them and have them complete with each other. Children realize their strength and weakness of studying through assessment, and they make efforts to strengthen their strengths and improve their weak points. In addition, assessment should cover children's cognitive, affective and psychomotor aspects because every human behavior is based on an interaction of all three aspects. Most educators now accept that assessment should be holistic and pay attention to the whole performance of children during lessons.

On the other hand, the assessment in the current teacher's manuals seems to aim at checking only children's knowledge or checking how much children memorized. The following

example of Social Studies at grade three clearly shows this tendency:

Topic:	*Our Village (Social Studies at Grade 3)*
Learning Objective:	*To be able to write down the location of the village and its main economic life.*
Learning Activity:	*Describe the location of the village you live in and discuss its commercial activities.*
Achievement Test: *(Assessment)*	*(a) Write down the location of your village.* *(b) Write down the main commercial activities of your village.*

As you know, the current assessment focuses only on cognitive aspects of children and does not pay attention to children's affective and psychomotor aspects. This assessment, therefore, measures only a small part of children's performance. In addition, it is only the result of children's learning, not the process of learning. The score of the tests (the chapter-end tests) is the result of children's learning performance. This way of thinking about assessment usually comes from the idea that teachers have to know children's level of achievement, while not considering children's accomplishments. Therefore, the current assessment system is still based on the teacher-centered attitude, not based on the child-centered attitude.

Recommendation:

- **Assessment should be holistic and concern more about children's affective and psychomotor aspects as well as cognitive aspect**

  Because any human behavior is based on an interaction of cognitive, affective and psychomotor aspects, assessment should pay attention to these three aspects. However, affective and psychomotor aspects of children are often assessed with great difficulty. It is impossible for the traditional written tests or examinations to measure affective and psychomotor aspects of children. Therefore, teachers must use various different assessment methods including performance observation, essay, debate and portfolio with the traditional tests.

- **Assessment should be viewed as the beginning of learning and the main purpose of it should be to support and improve children's learning**

  The attitude of teachers towards assessment must be changed. Assessment is not for teachers, but mainly for children. It is significantly important for children to realize what they understand and what they do not understand (or to improve the ability of the ***meta-cognitive***[1]). Then, children will make more efforts to strengthen more their strengths and

[1] The meta-cognitive, which is currently widely admitted in the field of education and psychology, means that learners monitor their level of understanding and judge it by themselves whether or not they understand deeply.

to overcome their weak points. In this respect, assessment is not the end of children's learning (the traditional thought), but is the beginning of children's learning.

6.2 General Studies

6.2.1 General Characteristics

Structure of contents

General Studies consists of three fields of study: natural science, moral & civics, and lifeskills. The natural science for KG, G1 and G2 is divided into four major parts: "Living Things," "Matter," "Energy," and "the Earth and Space," and includes three issues: natural environment, natural events, and true facts of science. The moral & civics and lifeskills may not have clear structures of their contents and seem to have a random arrangement.

Generally speaking, there are many topics in General Studies. Although it is important for children at lower primary level to learn slowly and understand issues deeply using their senses, many topics can make their learning only superficial and, as a result, children do not learn anything.

Allocation of time

In KG, 144 teaching periods have been allocated for natural science. Twenty-eight periods are for "Living things," 22 periods are for "Matters," 34 periods are for "Energy," and 18 periods are for "the Earth and space." Forty-two periods are reserved for revision. In G1, 144 teaching periods have been allocated for the natural science. The time-allocation of each part is 24, 24, 31 and 28, respectively with 37 periods for revision. In G2, 144 teaching periods have also been allocated for the natural science. Those time-allocations are 28, 22, 34 and 18, respectively with 42 periods for revision.

In terms of the moral & civics, 56 periods are allocated for teaching and 16 periods are for revision. In the lifeskills, 90 periods are allocated for teaching and 18 periods for revision.

Learning activities

Learning activities are listed in the current textbooks and Teachers' Manuals. However, these activities are not clearly stated nor do they show examples. Therefore, it is difficult for teachers to conduct the learning activities effectively.

6.2.2 Issues to be Improved

Design of textbooks

Textbooks always play a vital role for children's education. Good writing can stimulate children's imagination and ways of thinking. Good illustrations allow children to understand the key points immediately. However, the current textbooks of Myanmar's General Studies are poorly designed with little attention to child psychology. The contents are too descriptive about issues. Most illustrations are ambiguous and some of them are difficult to figure out

what they are because of unclear photocopies and photographs. These textbooks do not interest children or stimulate curiosity about studying. In addition, these unclear illustrations make teaching natural science difficult. It often happens that teachers cannot teach accurate information and knowledge to children in the field of natural science.

Besides the content and illustrations, the covers of the textbooks were also paid little attention to. The impact of a book's cover on children is huge. Good covers always influence children's interest in the subject matter and their strong motivation for learning. However, the covers of the current textbooks have only titles of the subject and no pictures or illustrations. Children are not attracted by such textbooks.

Therefore, textbooks should be designed based with careful consideration of child psychology. In spite of strict budgetary limitations, it is highly hoped that the Ministry of Education in Myanmar does its best to create good and attractive textbooks for children. A colorful textbook is preferable to the current black-and-white printing. However, it is difficult to do it under the current financial situation. Therefore, even two-color printing is also acceptable. It can have a great impact on children's learning.

Contents of textbooks

There are five points to be improved in the current contents of the textbooks: amount, sequence, diversity, terminology used, and integration of the fields of study. First, there are too many topics to teach. To teach all the contents, teachers always teach quickly and have little concern about children's level of understanding. As a result, children have only superficial knowledge of each topic and forget it easily. Children learn nothing in this situation.

Secondly, in terms of sequence of the contents, a consistent principle cannot be found in the current textbooks of General Studies. There is little mutual relationships and continuity between the topics. This makes it difficult for children to acquire knowledge and information step by step.

Thirdly, the current curriculum is uniform across the country. It does not pay attention to the diversity of the country's environment. Children often have difficulty in learning due to the teaching of fixed contents around the country without consideration of regional differences, children often have difficulty to learn. In this situation, learning in school is completely separated from their daily life. It is impossible for children to develop their interests in learning.

Fourth, some terminology used in the Teacher's Manuals is not easy for children and even for teachers. For example, the moral & civics has lessons dealing with Buddhist texts. These texts, originally written in the Pali language, are significantly difficult to understand.

Lastly, integration of some fields of study is very important. Although the subject title of "General Studies" is used, the current content of General Studies is clearly divided into three parts: natural science, moral & civics, and lifeskills. It is advisable and beneficial for children

to learn these different fields of study in a comprehensive and integrated manner, instead of pursuing three separate categories. Especially for children at KG, it is necessary to teach them through interesting plays and games which consider their needs and interests.

No existence of textbooks for Moral & Civics and Lifeskills

Currently there is no textbook provided for children to learn Moral & Civics and Lifeskills. Therefore, children do not understand what they will learn in these fields of study. In addition, in rural areas, there are many teachers who have never seen the Teacher's Manuals. In such areas, it is impossible for teachers to teach these fields of study effectively. To obtain a certain level of educational improvement, textbooks are necessary for teachers and children.

Teaching methods

The importance of learning through playing is currently not paid any attention to in Myanmar education at the kindergarten level. For 5-year old children, it is more essential and important to experience the joy of discovery rather than receiving pieces of knowledge through words. Play helps children prepare for adulthood by utilizing their own faculties, especially the five senses. They are trying to identify their enormous possibilities and the latent abilities. In play, there is almost everything necessary for thinking and creativity. It is the most important time for them to develop their mental faculty and social faculty, especially in relating to others. Therefore, it is necessary to allocate more time for KG children to play freely so that they are able to develop their faculty of enthusiasm and creativity. For the development of Myanmar in the 21st century, people who can think creatively and who can use their imagination and is absolutely necessary. General Studies would help children develop themselves in that way.

The important issues for children's learning are listed as follows:

- Children's "five senses" should be given more attention during the lesson periods. Through the lesson periods, children's capacity of discovering with their own eyes, of thinking about themselves, of extending their imaginations, and of presenting their opinions, should be nurtured. Variations in formation of students should also be planned carefully. That means not only plenary of the whole class sessions, but various kinds of group work depending on members. Tasks should be adopted so that children are constantly stimulated. It is important to include this aspect in the Teachers' Guides.

- Teaching methods that allow teachers to discover the qualities of each child through various activities and to encourage them are necessary. It is different from a simple written test, which cannot assess children's level of understanding and their attitude.

6.2.3 New Approaches Adopted

To develop the Teacher's Guides of General Studies, the following issues needed to be carefully concerned:

- The Teacher's Guides of General Studies are designed in such a way that teachers would easily understand the content of the lessons that they would have to teach, and that the lesson content is interesting using CCA. It is written in simple language not using difficult or unclear words so teachers can carry out the lessons without a problem. Also, illustrations play an important role in making the Teacher's Guides easily understandable. A good number of illustrations are used.

- Many interesting activities of natural science are included to allow children to observe nature directly from their own perspectives, and to participate, create, and develop their thinking processes. The importance of such faculty among students is well taken care of in the Teacher's Guides.

- The section of "Background Information" is introduced prior to each lesson procedure. In this section, the key points such as "why do children learn this topic?" and the vital issues, facts, and necessary for teachers to know beforehand are mentioned. In the "Reference" section, relevant knowledge for teachers to help children who seek further related information and to give further academic stimulus and encouragement is included.

- CCA requires huge amount of preparation for various teaching materials in order to bring out children's interests and curiosity. Such teaching materials are available in each locality and can be easily prepared and utilized by anybody.

- The relationships among the lesson topics are created to help increase the understanding of children. The children should be able to get a sense of totality from the lessons in natural science, lifeskills, and moral & civics, instead of learning three different categories of subjects. For example, the topic "Our Duty" in the Moral & Civics category is taught with viewpoints from Lifeskills and Natural Science as well, to develop it into a learning activity such as "Let's plant trees in order to protect environment as our duty."

- The distinct characteristics of the climate and cultures of the four regions in the country such as coastal area, delta area, dry area and the mountainous area, should be given careful consideration in the Teacher's Guides. Since the uniform curriculum is used irrespective of the regions where the natural and cultural situation differ greatly, there are some obstacles in making locally-based lesson content, something that always works better for children's understanding. It has been proven that it is very effective to reflect the local characteristics in the teaching and learning. In the Teacher's Guides, it is required to suggest, even as examples, four different or modified ways of teaching the same topic depending on the specific region, for teachers to be better able to cater to the needs of respective children.

- It is often the case in the lower primary level in rural areas to have a multi-grades system. In this system, there are children of different age groups and of the various learning competency in the same classroom. It is important to consider this point and to suggest effective CCA methods for such classroom situations. The Teacher's Guides can provide examples of practical teaching methods depending on the different content of lessons, on the respective achievement levels, on the age groups, and on the groups of shared interests.

6.3 Basic Science

6.3.1 General Characteristics

Structure of contents

The curriculum of Basic Science is designed by four strands: biology, chemistry, physics and geology. The contents are mainly quoted from the higher education level sources, and are written with simplified words regardless of cognitive effectiveness. In addition, there are some replications of contents among subjects between Basic Science and Social Studies. Moreover, in terms of level of the contents, there is a big gap between G2 and G3.

Activities/methodology

The one-way-teacher-to-students method is very common in Basic Science. A teacher reads textbooks and explains them briefly. Then he/she emphasizes some key sentences and words. Children repeat loudly those sentences and words and memorize them. Although this teaching method is not effective for science education to develop children's creativity and scientific thinking, most teachers believe that there is no alternative without sophisticated teaching materials and with only the limited time-allocation for lessons. Moreover, the teachers are afraid to do some activities because they have never experienced such activities even when they were children.

Another problem is a severe shortage of teaching materials. For example, the topic of the "magnet" cannot be taught without magnets. The topic of "the earth, the moon and the sun" can be taught effectively only with models. Therefore, it is significantly difficult to implement effective CCA under the current condition.

Assessment

In the present situation, assessment considerably depends on written tests. Teachers mainly check how much information children memorize. Assessing children's attitude, skills and scientific thinking has hardly been done. Although the "Continuous Assessment and Progressive System (CAPS)" was introduced, it is difficult for the teachers to practice this type of assessment because their level of understanding of CAPS is not high enough

6.3.2 Issues to be Improved

Structure of content

Some content should be reorganized based on concerns about children's psychological development and Myanmar's local environment such as seasonal and geographical varieties. The new arrangement of the content in the Teacher's Guides of Basic Science is showed in **Table 6-1**.

Table 6-1 Reorganized Contents

Grade 3		
Present Contents	**Re-organized Contents in Teacher's Guide**	**Notes**
Part 1 Living Things		
1.Different type of Living Things	1. Different type of Living Things (Habitant) 2. Five Sense	The concept is more clearly defined to learn about "Habitants"
2.Animals	2.Animals	The overlapped content "Vertebrate and Invertebrate" can be only in G4
		Life Skills contents which are overlapped, can be integrated in Life Skill.
3.Plants	3.Plants	The concept is more clearly defined to learn about "Different type of plants by classification"
Part 2 Matters		
4.Matters in environment	4.Matters in environment	
5.Properties of Matters	5.Properties of Matters	
6.Changing State of matter	6.Changing State of matter	
7. Solubility of solid in water	7. Solubility of solid in water	
Part 3 Energy		
8.Heat	8.Heat	"Heat" in G4 is moved to G3
9.Sound	9.Sound	
10.Light		"Light" in G3 is moved to G4
11.Magnetism and Electricity	10. Magnetism	"Electricity" in G3 can be taught more efficiently in G4 at once
12. Movement		"Force and Motion" in G3 can be taught more efficiently in G4 at once
Part 4 The earth and Sky		
13.Weather	11.Weather	The overlapped content "Measuring Temperature" can be G4 at once.
14. Different kind of water	12. Water and Soil	"Type of Water" can be extended to "Environmental Study" for linking to G4 "Soil Erosion"
15. Type of land		Landscape can be combined in Geography

Grade 4		
Present Contents	**Re-organized contents in Teacher's Guide**	**Notes**
Part 1 Living Things		
1.Different type of Living Things	1.Different type of Living Things	Life Skills contents which are overlapped, can be integrated in Life Skill.
2.Animals	2.Animals	Life Skills contents which are overlapped, can be integrated in Life Skill.
3.Plants	3.Plants	Life Skills contents which are overlapped, can be integrated in Life Skill.
Part 2 Matters		
4.Matters in environment	4.Matters in environment	The content is more clearly defined to learn about volume, weight and density.
5.Properties of Matters	5.Properties of Matters	
Part 3 Energy		
6.Heat		"Heat" in G4 can be taught more efficiently in G3 at once
7.Sound		"Sound" in G4 can be taught more efficiently in G3 at once
8.Light	6.Light	
9.Magnetism and Electricity	7.Electricity	"Magnet" in G4 can be taught more efficiently in G3 at once
10. Movement	8. Movement	
Part 4 The earth and Sky		
11.Weather	9.Weather	"Weather condition (Type of clouds)" can be combined in "Weather Symbols" in G3
		"Wind speed" can be combined in G3 "Wind direction"
12. Causes of Soil Erosion	10. Causes of Soil Erosion	The content can be extended to learn environmental view largely
13. The Earth the Moon and the Sun	11. The Earth the Moon and the Sun	

Assessment

In science education, assessment should include children's attitude and skills as well as knowledge. In other words, it is highly important not only to assess how much knowledge children gained, but also to evaluate children's motivation, attitude towards lessons, levels of skills and technique, and ability of scientific thinking. The scientific skills and technique, for example, include carefully observations with using a magnifying glass and drawing pictures based on their observation. Scientific thinking includes a series of thinking processes of making a prediction, formulating a hypothesis, accepting or rejecting the hypothesis, and formulating a conclusion.

Communication

It is significantly important for children to develop communication skills. In the Basic Science lessons, it is vital for the implementation of lessons that children discuss some issues by group and express their ideas. To do so, teachers must give children clear instructions and guidelines and must play an important role as facilitators and supporters during lessons, not as strong authorities. Science experiments, observations outside classroom, and story telling are excellent occasions for children to discuss with each other and to develop their communication skills.

6.3.3 New Approach Adopted

Contents

In Basic Science, the contents of the Teacher's Guides basically follow the present contents of the textbooks and teacher manuals. However, a few topics were shifted between grades 3 and 4. This is because technical working group for Basic Science believe it better to learn a certain topic at a time rather than to learn small contents of the same topic in grades 3 and 4. For instance, the topic whose name is "magnetism and electricity" is inadequately introduced in grades 3 and 4 in the present content. The Teacher's Guides try to separate the topic and comprehensively introduce "magnetism" in grade 3 and "electricity" in grade 4.

By focusing a certain subject or topic in one grade, learning of children will become more efficient and their level of understanding could become more comprehensive and deeper. In addition, it will be easier and more practical for teachers to prepare lessons and teaching materials when they teach whole contents of a topic in the same grade. As showed in **Table 6-1**, the transfer of topics was made in the topics of "heat," "light" and "sound." In order to avoid making teachers confused, these minor transfers will be mentioned in the first chapter of the Teacher's Guides for grades 3 and 4.

The Teacher's Guides provide teachers with deeper and wider skills and knowledge for each topic. Each topic has 6 steps that are *Concepts & objectives, Before getting started, Lesson planner, Activities, Lesson plans, and Assessment*. The teachers be sure what the main points of the topic are in *Concept & objectives*. They can improve their academic knowledge in *Before getting started.* They can understand how they can effectively allocate time to teach the topic by looking at the *Lesson plann*er. They can get many interesting ideas about activities related to the topic in *Activity.* They can refer to several examples of *Lesson plans*, and they can use those plans and modify them as well. Finally, they can see how to assess children learning in each topic when they look in *Assessment.*

Methodology

In order to better learn about science, the use of experiments, observations, making images and handiworks are vital. These four activities are stressed in each lesson of Basic Science in the Teacher's Guides. In addition to those four activities, there are the main six strategies in designing CCA Basic Science lessons. The strategies are as follows:

- **Find science in life (a close relation between life and science):**
  Our life is surrounded by science. Children already know many scientific things from their experiences. Science lessons could be the opportunity to figure out those sciences in life together with a teacher and friends. Most activities introduced in the Teacher's Guides are related to our usual life. For example, children wonder why water condenses on the outside of cold bottles or glasses. How do they usually explain to themselves about how water condenses on a bottle or other amazing things in their lives?

- **Attract interests of students:**
  CCA always goes with the interests of children. If a lesson goes without attracting children's interest, the lesson will become joyless and tiresome. Using a child's interests can result in better learning and stimulate their potential. Just providing the opportunity for children to conduct experiments is not always adequate to attract their interests. Connecting science (topic) to the life of children is one of more effective ways to attract their interests. In this sense, an introduction part in the lesson becomes as important as conducting activities.

- **Think, predict, carry out and observe by children:**
  This is the basic concept for Basic Science lessons. Science should not be limited to words in a textbook. It makes more sense when it is carried out on the children's desks by creative and innocent children. The Teacher's Guides show many activities which can be easily prepared by teachers and conducted by children. The important thing is that children make images (predict) before carrying out the activities, they observe the result and they review the result with their images they previously made.

- **Solve problems together and discuss with other students:**
  To find answers together with teachers and friends is effective in learning science and fun for children. Science is not something to just repeat what teachers say and to memorize. Facing problem or scientific phenomenon, children positively try to figure them out through exchanging their ideas with friends and teachers.

- **Develop individual creativity:**
  To be creative and express him/herself is as important as knowing right answers. In CCA, it is recommendable for teachers not to give "Yes-or-No-questions" or to introduce ideas only from teachers to children. Given time and several options, children are able to come up with their own answers. It is essential for children to think about science using their own ideas and express him/herself. Teachers are not supposed to say "Yes" or "No" to those creative ideas or try to correct them.

- **Use local materials for practice in an experiments and activities:**
  It has been said that carrying out science experiments is difficult simply because there are no teaching materials. The Teacher's Guides introduce various materials which can be made of locally available materials. Teachers will realize that they can make any teaching material by using things around them.

6.4 Social Studies

6.4.1 General Characteristics

Structure of contents

The current structure of contents of Social Studies is composed of geography, history, moral & civics, and lifeskills, and is taught at grades three and four. The structure of contents of Social Studies is too complicated to mention with a few words, because each field of study takes different structures. Geography at G3 is basically based on the "*expanding environmental arrangement*" whose composition of contents is from smaller social units (such as family and school) to larger social units (such as state, division, and country). The history at G3 is arranged based on chronological order such as the first Myanmar Empire (1044-) to the third Myanmar Empire (-1885). However, the structures of geography and history at G4 are completely different from those at G3. Geography and history are arranged alternatively because of the strong intension to integrate these two fields of study. For example, the topic of the famous Kachin person, "*Bo Po Saw*," (history) is taught next to the topic of "Kachin State" (geography).

It is difficult to figure out what type of structure moral & civics and lifeskills take. The topics in those fields of study seem to be randomly arranged because of the lack of any clear relations among the topics.

Table 6-2 Curriculum Structure of Social Studies

	Grade 3	Grade 4
Geography	Expanding Environmental Arrangement	Geography-history Alternative Arrangement
History	Chronological Arrangement	
Moral & Civics	Randam arrangement ?	Randam arrangement ?
Lifeskills	Randam arrangement ?	Randam arrangement ?

indicates the curriclula needed to be carefully reviewed.

Teaching contents

All the contents are highly descriptive. Each topic includes many issues. However, these issues are only mentioned briefly with a few words so that it is difficult to find what relation exists between issues and what is the key point in the topic. For example, the topic of "Food we eat" (geography at G3) describes mainly many different types of foods, such as vegetables (gourd, eggplant, tomato, etc.), fruits (mango, jackfruits, durian, etc.), livestock (cattle, cow, sheep, etc.), fish, staple foods (rice, wheat, etc.) and sugar. Besides listing many different kinds of food, this topic does not give us any important instructions.

In the field of history, most of the topics focus on famous historical people with some events directly relating to them. The same as with geography, the contents of history are also descriptive focusing mainly on what famous historical people did. There is no explanation

about the social background and situations of each era. Therefore, it is difficult for teachers and children to understand why those people appeared and why they did such things.

Learning activities

According to the current Teacher's Manuals, there are several learning activities in Social Studies, such as "Describe something," "Explain something," "Discuss something by group," "Fill in the names on the blanks," etc. These activities are generally divided into five categories as follows:

- Simple question and answer (ex. what, when, where, how many, and how much?)
- Questions requiring explanations (ex. why and how?)
- Group discussion
- Recitation
- Physical activity (ex. demonstration, drawing, role-playing, and creating scrapbooks)

Among those various activities, the "simple question and answer" is most commonly used during lessons. This type of activity rapidly increases in G4 (This type of activity accounts for 55% of the total number of activities). Following the "simple question and answer," the activity of "questions requiring explanations" is also commonly practiced during lessons. However, this type of activity is often changed into simple questions by teachers. For example, in the Teacher's Manual, there is a question, "Describe the reasons why Mandalay division is distinctive division." This is the activity requiring explanations. However, most teachers in the real classrooms use such questions as "What is there in Mandalay?" (The answers are old pagodas, traditional handicrafts and the Imperial Palace.) Then, the teachers usually conclude, "That's why Mandalay division is a very distinctive division." Therefore, the questions requiring explanations often become very simple question.

In addition, there are only a few physical activities in the learning activities. This type of activity accounts for only 10% in both G3 and G4. The physical activity is mainly drawing maps (for geography), creating scrapbooks (for history), and demonstrations (for lifeskills).

Table 6-3 The Number of Learning Activities by Category

Learning Activities of Social Stuides (G3)

	Simple Q & A (ex. What ?)	Explanation	Group Discussion	Reciting	Physical works (Demonstration, drawing, scrapbooks)	Others	Total
Geography and History	25	23	13	0	7	3	**71**
Moral & Civics	14	16	1	9	1	0	**41**
Lifeskills	35	13	3	0	10	0	**61**
Total	**74**	**52**	**17**	**9**	**18**	**3**	**173**

Learning Activities of Social Stuides (G4)

	Simple Q & A (ex. What ?)	Explanation	Group Discussion	Reciting	Physical works (Demonstration, drawing, scrapbooks)	Others	Total
Geography and History	52	41	10	0	23	1	**127**
Moral & Civics	29	17	3	12	1	0	**62**
Lifeskills	89	7	17	1	5	0	**119**
Total	**170**	**65**	**30**	**13**	**29**	**1**	**308**

6.4.2 Issues to be Improved

Structure of contents

The current structure of contents of Social Studies might make teachers and children confused because sequence of the content is not paid enough attention to. Sequence, which is the vital curriculum design, can give us a clear direction on how children learn. Without concern about sequence, curriculum does not work well, and teachers and children cannot learn anything in a way of structured manner. Although geography and history at G3 give us clear learning directions such as expanding our view from simple to complex (geography) and learning chronologically (history), those at G4 do not follow these clear sequential designs. Even if children develop a clear view and learning direction in geography and history during the study at G3, the G4 curriculum with less concern about sequence may ruin this view and learning direction.

In addition, moral & civics, and lifeskills do not have any clear sequence in both G3 and G4, and their contents seem to be arranged randomly. In this curricula, it is highly difficult to realize what is the key concept in the field of study.

To show teachers and children a clear direction on what and how to learn, the curriculum should be designed with careful concern about sequence. The field of geography at G4 should follow the same sequential design at G3, the "expanding environment arrangement." The field of history at G4 should also follow the same design as one of G3, the "chronological arrangement." The contents of moral and civics, and lifeskills should be re-arranged and re-organized in appropriate ways.

Learning activities

According to the current Teacher's Manuals of Social Studies, the way of "simple Q & A" is commonly used. In grade three, 43% of the total activities is this type. In grade 4, 55% of the total activities is the simple Q & A. This type of activity is usually teacher-to-children-one-way-communication and dose not create good interaction between teachers and children.

The problem-solving method requires the following steps: (1) Awareness of difficulties, (2) Identification of the problems, (3) Classification of data and formulation of hypotheses, (4) Acceptance or rejection of the hypotheses, and (5) Formulation of conclusions. To implement this method, group discussion, questions requiring explanations, and physical activities are more important than the simple Q & A. However, such activities account for only 40% of all the activities. Especially, physical activities such as demonstration, drawing and role-playing, which highly motivate children, account for only 10%.

To conduct the problem-solving method and implement effective CCA lessons, learning activities should be reviewed carefully and be boldly renovated with using more group discussion and physical activities.

6.4.3 New Approaches Adopted

To improve the current Teacher's Manuals, Social Studies has conducted bold innovations in two major parts: **structure of contents** and **learning activities**. These innovations were made with careful concern about educational effectiveness and child psychology based on the concept of CCA. During the process of creating new Teacher's Guides of Social Studies, various educational theories and recent research results in the field of children's psychological development were carefully reviewed and were fully used in the Teacher's Guides. Besides these two parts, the Teacher's Guide of Social Studies for G4 introduces a new concept: the "**case study**." In this case study, many new approaches and methods are used to conduct real CCA.

The **structure of contents** of the current Social Studies is not clear. It has a critical problem in its sequence. This unclear sequence may have caused difficulties in discerning what is the key concept of Social Studies as well as each topic. In addition, it may have made Social Studies less interesting and much more difficult to understand for teachers and children. MBESS takes the position that "Social Studies is a consecutive story about people living in society" and pays great attention to the sequence of contents. As a result, the new structure of the contents is created as follows:

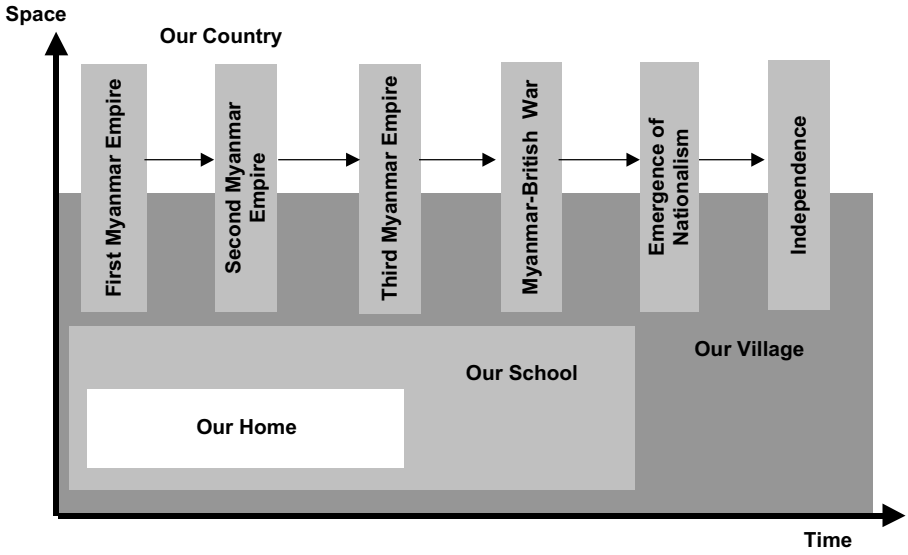


Figure 6-3 Curriculum Structure of Geography and History

In the field of geography, the *expanding environment arrangement* was mainly used, which deals with the topics of "home," "school," "village," and "country" in that order. Children can learn about their society by starting with something simple and close to their daily lives progressing to more complex concepts step by step. In the field of history, the contents were rearranged chronologically. Although these two different fields of study, geography and history, take different arrangements: spatial arrangement and chronological arrangement, these two are related to each other. The interactions between the two are seen in the topics of "Our Village" and "Our Country" (geography), and all the topics (history).

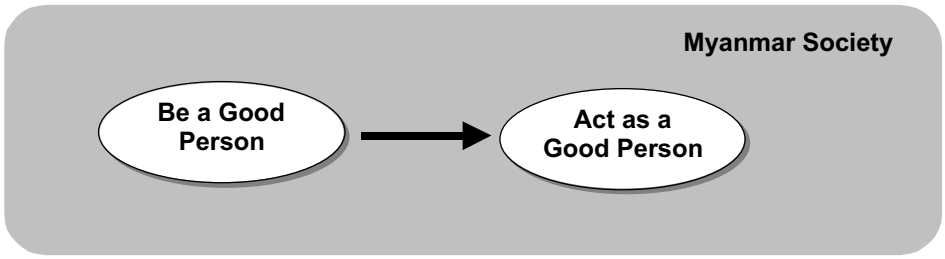


Figure 6-4 Curriculum Structure of Moral & Civics

In the field of moral & civics, the current topic contents, which do not have clear relations among them, were boldly rearranged under the new titles of "Be a good person" and "Act as a good person." In "Be a good person," the main concept is "how should we be?" which deals with the necessity of becoming a good person who respects others and is patient and humble. The main concept of "Act as a good person" is "what should we do?" which deals with the importance of attitude and behavior, such as being polite, fair, diligent, and dutiful attitude.

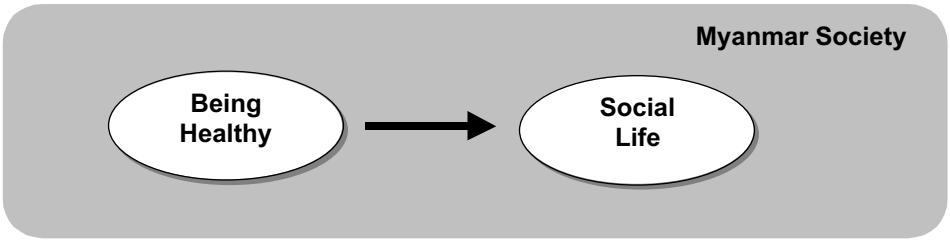


Figure 6-5 Curriculum Structure of Lifeskills

In the field of lifeskills, the current topic contents were reshuffled and reorganized under three new chapters: "Being healthy," "Happy life," and "Handicraft." As with moral and civics, a clear concept was established based on the current objective of lifeskills which is "how we live in our society" All the topic contents are taught in order to achieve this key concept.

The current **learning activities** consist mainly of "simple Q & A" because the textbooks are highly descriptive and include a large amount of information without any structural frameworks. Therefore, most learning activities only check children's memorized knowledge. It is difficult for teachers to adopt structured activities in the current situation.

The new Teacher's Guides of Social Studies, however, were able to adopt various meaningful activities because the key concept in each topic became highly clear through reorganization of the curriculum structure. It became easier to pick up the key concept of each topic. Teachers were able to think about how to teach the key concept. To teach the concept clearly and effectively, the teachers were also able to think about various different methods, such as observation, group discussion, field trip, interview, etc. As a result, there is few "simple Q & A" in the new Teacher's Guides of Social Studies and many group discussion and group work.

One of the significant characteristics of Social Studies learning activities is to adopt many scientific methods such as reading graphs, analyzing data, and finding something new from statistics. In these activities, what children find from graphs, data and statistics is paid much attention to, not only reading them. Through having these activities regularly, children can develop their analytical, critical and creative thinking skills. The second major characteristic of the new learning activities is that these activities are designed to help children establish their own ideas about various issues. In real society, there is never only one correct answer to any situation or problem. We usually have various different ways to solve a problem. Therefore, it is highly important for children to develop skills to understand situations and find better answers by themselves.

The **case study** was introduced at G4 to enhance children's research skills on particular issues. Because this is a newly created topic and since there are no limitations in the current textbooks, this case study is fully designed based on the concept of CCA. This lesson includes two cases: "Kyaukse" (Mandalay Division) and "Falam" (Chin State). Both case studies use the problem-

solving method. For example, in the case study of "Falam," children's incomplete knowledge that "people in Falam eat the same curry as people in Yangon" is the starting point. At the beginning of the lesson, children are surprised to learn that their prior knowledge is incorrect after reading a letter which explains that people in Falam eat "corn soup", which cannot be found in Yangon. This surprise can make children highly motivated for further study about this issue. Then, children start to research about this unique food and about Falam to answer the question of "why do people in Falam eat such a food?" In the process of finding the answers, children are required to write letters to people in the agricultural department, interview an expert of the Falam area, and look for many materials about Falam. Through these activities, children can gain not only knowledge but also develop their ability to learn. Many educators and teachers currently believe that the development of the ability to learn is highly important for education.

This method was introduced to Myanmar primary education for the first time. Unlike the traditional method, the new methods require teachers to have wider views on various issues and to have a flexible and broad-minded attitude towards different opinions. Therefore, teachers need to study various issues deeply and further develop their capacity.

APPENDIX 6-1: New Framework of General Studies

KG

(A) Natural Science

Part I: Living Things

Chapter 1: Observation of Different Kinds of Living Things in Our Environment
Chapter 2: Utilization of Water
Chapter 3: Importance of Air for Living

Part II: Matter

Chapter 4: Studying the Objects inside the Classroom
Chapter 5: Comparing One Object to Another
Chapter 6: Size

Part III: Energy

Chapter 7: Heat - The Hot and the Cold
Chapter 8: Sound - Listening to the Sound
Chapter 9: Light - The Light and the Dark
Chapter 10: Magnet - Attracting Properties of Magnets
Chapter 11: Electricity - Domestic Electrical Devices

Part IV: Earth and Space

Chapter 12: Daily Weather
Chapter 13: Different Sources and Uses of Water
Chapter 14: Observation of Natural Phenomena in the Sky at Daytime and at Night

(B) Morals and Civics

Part V: Morals and Civics

Chapter 15: Good Habits of Politeness
Chapter 16: National Spirit and Patriotism
Chapter 17: Morals - Duties of the Student
Chapter 18: Culture and Dutiful Person
Chapter 19: Stories

(C) Life Skills

Part VI: Life Skills

Chapter 20: Personal Hygiene - Healthy Practice
Chapter 21: Food - Food and Eating
Chapter 22: Clothing - Clothing and Dressing
Chapter 23: Social Skills - Relationships with Others

Grade 1

(A) Natural Science

Part I: Living Things

Chapter 1: Living Things in Our Environment
Chapter 2: Requirements of Living Things

Part II: Matter

Chapter 3: Studying the Objects around One's Environment at home and School Garden
Chapter 4: Observation of Objects around One's Environment
Chapter 5: Making Comparison of Objects
Chapter 6: Differentiating Objects in What They Are Made up of and Recycling the Used or Waste Materials

Part III: Energy

Chapter 7: *Heat* - Heat Emitting Objects and Sources of Heat
Chapter 8: *Sound* - Voice and Types of Sound
Chapter 9: *Light* - Light Emitting Objects and Sources of Light
Chapter 10: *Magnet and Electricity* - Different Kinds of Magnet and Electric Appliances

Part IV: Earth and Space

Chapter 11: Observation of Weather Condition
Chapter 12: The Source of Water Determines Its Quality
Chapter 13: Soil from Different Locations Will Have Different Properties
Chapter 14: Observation of the Sun, the Moon and the Stars

(B) Morals and Civics

Part V: Morals and Civics

Chapter 15: Preserve the Culture of Politeness
Chapter 16: National Spirit and Patriotism
Chapter 17: Duty of Younger Brothers and Sisters
Chapter 18: Our Duty
Chapter 19: Stories

(C) Life Skills

Part VI: Life Skills

Chapter 20: Personal Hygiene
Chapter 21: Food and Eating
Chapter 22: Clothing and Dressing
Chapter 23: Relationships with Others
Chapter 24: Environmental Education

Grade 2

(A) Natural Science

Part I: Living Things Found in Environment

Chapter 1: (a) Parts of animals, (b) Parts of plants
Chapter 2: Requirements of Living Things
(a) Food and water, (b) Air, (c) Shelter, (d) Clothing
Chapter 3: Environment Conservation [3)]

Part II: Matters

Chapter 4: Studying Liquid Around One's Environment
Chapter 5: Movement of Objects in Water
Chapter 6: Study of Gas
Chapter 7: Matter Exists in Three States -Solid, Liquid or Gas

Part III: Energy

Chapter 8: *Heat* - Friction Causes Heat and Safety Rules for Fires
Chapter 9: *Sound* - Feeling Due to Sound
Chapter 10: *Light* - Advantages of Light
Chapter 11: *Magnet and Electricity* - Use of Magnets and Electricity and Safety Rules for Electricity
Chapter 12: Different Kinds of Motion

Part IV: Earth and Space

Chapter 13: Clouds and Measuring Temperature
(a) Observation on the Changes of Cloud, (b) Examination of Temperature
(c) Changes of a Day

Chapter 14: Making Comparison of Different Soils
Chapter 15: The Sun and the Moon

(B) Morals and Civics
Part V: Morals and Civics

Chapter 16: Graceful to the Eyes and Politeness on the Road
Chapter 17: National Spirit and Patriotism
Chapter 18: Sports and Duties of Friends
Chapter 19: Dutiful Person and School Holidays
Chapter 20: Stories

(C) Life Skills
Part VI: Life Skills

Chapter 21: Personal Hygiene
Chapter 22: Nutritious Food
Chapter 23: Purifying Water and Diarrhea
Chapter 24: Social Skills
Chapter 25: Environmental Education

APPENDIX 6-2: New Framework of Basic Science

Grade 3

Chapter 1 Living things
- Topic 1. Different type of living things
- Topic 2. Animals
- Topic 3. Plants

Chapter 2 Matters
- Topic 4. Matters in environment
- Topic 5. Properties of matters
- Topic 6. Changing state of matter
- Topic 7. Solubility of sold in water

Chapter 3 Energy
- Topic 8. Heat
- Topic 9. Sound
- Topic 10. Magnetism

Chapter 4 The Earth and Space
- Topic 11. Weather
- Topic 12. Water and Soil

Grade 4

Chapter 1 Living things
- Topic 1. Different type of living things
- Topic 2. Animals
- Topic 3. Plants

Chapter 2 Matters
- Topic 4. Matters in environment
- Topic 5. Properties of matters

Chapter 3 Energy
- Topic 6. Light
- Topic 7. Electricity
- Topic 8. Movement

Chapter 4 The Earth and Space
- Topic 9. Weather
- Topic 10. Causes of soil erosion
- Topic 11. The earth, the moon, and the sun

APPENDIX 6-3: New Framework of Social Studies

Grade 3

Part I: Our Living Area
- **Chapter 1: Our Home**
  - Lesson 1: Our Family
  - Lesson 2: House We Live
  - Lesson 3: Food We Eat
  - Lesson 4: Clothes We Wear
- Supplementary Study: Pictures, Scale Models and Maps
- **Chapter 2: Our School Area**
  - Lesson 5: Our School and the Surrounding Area
- **Chapter 3: Our Village Areas**
  - Lesson 6: Our Village and the Neighboring Areas
- Supplementary Study: Environmental Scenes
- Supplementary Study: Map of Myanmar Showing Historical Towns

Part II: Our Great Ancestors
- **Chapter 4: Famous Kings in the First Myanmar Empire**
  - Lesson 7: King Anawrahta
  - Lesson 8: King Kyansitta
  - Lesson 9: Great Son Rajakumar
- **Chapter 5: Strong King in the Second Myanmar Empire**
  - Lesson 10: King Baying Naung
- **Chapter 6: Famous Kings and Persons in the third Myanmar Empire**
  - Lesson 11: King Alaungmintayar
  - Lesson 12: General Maha Bandola
  - Lesson 13: Bo Myat Tun
  - Lesson 14: King Mindon

Part III: Moral and Civics
- **Chapter 7: Be a good person**
  - Lesson 15: Respect people
  - Lesson 16: Be patient
  - Lesson 17: Be humble
  - Lesson 18: Not Be Greedy
- **Chapter 8: Act as a good person**
  - Lesson 19: Polite attitude and behavior
  - Lesson 20: Fair attitude and behavior
  - Lesson 21: Diligent attitude and behavior
  - Lesson 22: Dutiful attitude and behavior
- Supplementary Study: Traditional Custom (Riddle)

Part IV: Lifeskills
- **Chapter 9: Being Healthy**
  - Lesson 23: Personal Hygiene
  - Lesson 24: A Sound Body
  - Lesson 25: Dengue Fever
  - Lesson 26: Smoking
  - Lesson 27: HIV/AIDS

Chapter 10: Social Life
Lesson 28: Making the Right Decision
Lesson 29: Being on Good Terms with Others
Lesson 30: Obeying Discipline

Grade 4

Part I: Our Country Myanmar
Chapter 1: Our Country
Lesson 1: Diverse Characters of Our Country
Lesson 2: Large Cities and Small Cities in Our Country
Lesson 3: National Races in Our Country
Supplementary Study: The Study of Weather Condition
Chapter 2: Various Regions
Lesson 4: Three Areas and People's Life Style
Lesson 5: (Case Study I): People's Living in Central Plain Area
Lesson 6: (Case Study II): People's Living in Mountainous Area
Chapter 3: Our Country and the World
Lesson 7: Our Country as a member of ASEAN
Supplementary Study: The Study of Eight Directions and Location

Part II: Era with Agony, Hope and Delight
Chapter 4: Myanmar-British War and Colonialism
Lesson 8: British Occupation
Lesson 9: Regional Resistances
Chapter 5: Emergence of Nationalism
Lesson 10: Rising the Nationalism
Lesson 11: Farmers' Revolution
Lesson 12: Resistance against the Japanese fascism
Supplementary Study: U Shwe Zan Aung
Chapter 6: Independence
Lesson 13: Gen. Aung San and Independence
Lesson 14: Other Heroes for Independence

Part III: Moral and Civics
Chapter 7: Be a good person
Lesson 15: A Good moral and Strong Will
Lesson 16: Importance of Education and Admonition
Lesson 17: Be Grateful and Avoid Ill Temper
Chapter 8: Act as A Good Person
Lesson 18: Politeness
Lesson 19: Etiquette and Good Manners
Lesson 20: Five Precepts and Bad Behavior
Lesson 21: Duties and Responsibilities

Part IV: Lifeskills
Chapter 9: Being Healthy
Lesson 22: Personal Hygiene
Lesson 23: Clean Water

Lesson 24: Using a Toilet
Lesson 25: Nutrition
Lesson 26: Malaria
Lesson 27: Narcotic Drugs
Lesson 28: HIV/AIDS
Lesson 29: Mental Health

Chapter 10: Social Life

Lesson 30: Prioritization
Lesson 31: Help and Cooperation
Lesson 32: Obeying Discipline
Lesson 33: Observing the Traffic Rules
Lesson 34: Dangers in Surroundings

CHAPTER 7
CCA WORKSHOP

7.1 Objectives of CCA Workshop

The JICA Study Team holds CCA workshops in various areas of Myanmar with the following two aims:

1. To examine whether the lesson plans are appropriate in rural environments,
2. To support establishing an institutional framework which aims to spread CCA across the country.

The first objective is to test newly created lesson plans in different environments in order to find out the effectiveness of the lesson plans and what obstacles exist in the implementation of them. After the workshop, the JICA Study Team thoroughly reviews the lesson plans and revise some parts if necessary.

The second objective is to support establishing the basis of disseminating CCA. The country is specifically divided into eight clusters based on the location of education colleges. Each cluster includes several education colleges that will be the regional centers for the dissemination of CCA. Besides these eight clusters, Lashio, Kengtung and Falam will be designated as the regional centers, located in Northern Shan State, Eastern Shan State, and Chin State respectively. These places do not have an education college, but are strategically important in the region. The JICA Study Team visits these areas to find capable personnel through CCA workshops. The selected personnel will be listed as candidates for future local resource persons and be invited to various seminars and workshops held by the JICA Study Team.

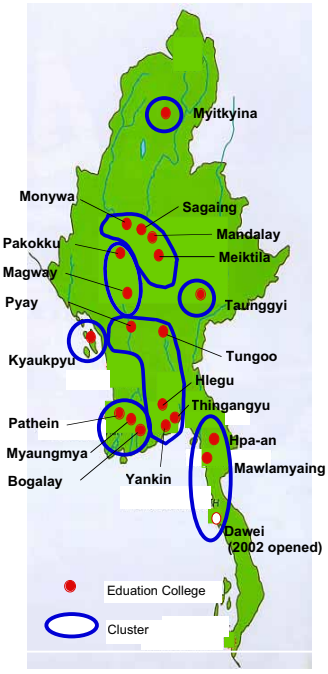


Figure 7-1 Regional Clusters

7.2 Program of CCA Workshop

The program of CCA workshops consist mainly of (1) Demonstration lessons, (2) Discussion and (3) Group activity. All programs are prepared and implemented by working group members.

Table 7-1 Example of the Program of CCA Workshop

Day 1:	
09:00-09:20	Opening Speech
09:20-09:40	Objectives of Workshop
09:40-10:40	Demonstration (1)
10:40-10:50	Break
10:50-11:50	Demonstration (2)
11:50-14:00	Lunch Break
14:00-15:00	Explanation of "What is CCA?"
15:00-16:50	Panel Discussion of "What is CCA?"
16:50-17:00	Closing Remark for Day 1
Day 2:	
09:00-10:00	Discussion of "How do we make CCA lessons?"
10:00-11:00	Discussion of "How do we implement CCA lessons?"
11:00-12:30	Group Working
12:30-14:00	Lunch Break
14:00-15:00	Group Working
15:00-16:10	Presentation by Group
16:10-16:10	Demonstration of Lesson Plans
16:50-17:00	Closing Remark

The demonstration lessons are conducted by YECPS teachers who are the members of the working group. The teachers demonstrate lessons for a 30 or 35-minute period based on lesson plans newly developed by MBESS. This demonstration can show differences between a CCA lesson and a traditional lesson clearly and help participants understand the concept of CCA. Participants in the workshop are usually impressed by the demonstration.

Following demonstrations, the issue of "What is CCA?" is discussed. The working group members explain the key concept of CCA and its characteristics step by step by recalling the demonstrations. This discussion can help participants develop a clear image of CCA lessons. Unique questions are sometimes brought up during the discussion period and the discussion between working group members and participants can become heated. The participants can gain a certain level of knowledge of CCA by the end of the discussion.

On the second day, CCA is discussed in more practical ways such as how to make CCA lessons and how to implement CCA in real classrooms. Through this session, the participants gain

specific skills and techniques for implementing CCA.

In the end of the workshop, the participants work in groups to make an interesting lesson plan using knowledge gained during the two-day workshop. They are usually given approximately two and half hours for group work. The participants discuss actively and work with others cooperatively. After completion, each group has a presentation about their lesson plans. Then, the lesson plan which gets the most support from participants is presented in front of everyone.

7.3 CCA Workshops and the Results

Since the extended study was started from November 2002, CCA workshops have been held in the following places: Dawei (Thanintharyi Division), Monyawa (Sagaing Division), Lashio (Northern Shan State), Yangon (Yangon Division), Magway (Magway Division), Taunggyi (Southern Shan State) and Hakha (Chin State). These seven places represent the most geographically characteristic places of the country: Dawei represents the coastal region of the country, Monywa and Magway represent the central plain region, Lashio, Taunggyi and Hakha represent the mountainous region. Yangon is the capital city of Myanmar and represents the developed urban area. Not only are there characteristic environment and atmosphere in each area, but also the attitude of teachers and students toward schools is distinctive from place to place. The participants in three CCA workshops are as follows:

Table 7-2 Participants of CCA Workshops

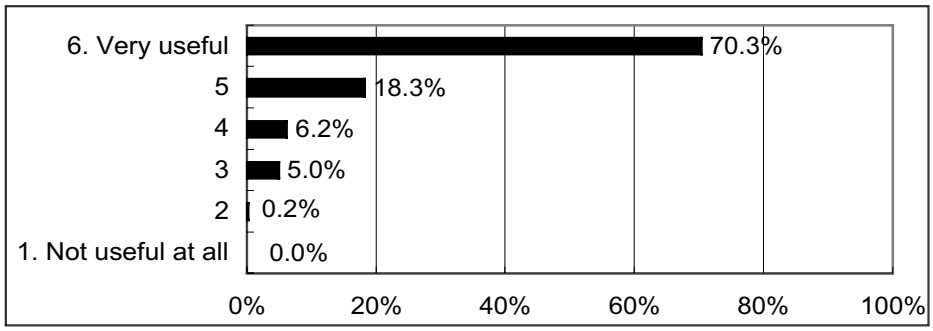
Place	Date	Place	No. of Participants						
			Ministry of Education	State or Division Education Office	Township Education Office	Education College	Primary School	Other	Total
CCA Workshop (Dawei)	Jan. 14-15, 2003	Dawei Education College, Thanintharyi Division	0	3	9	33	46	0	**91**
CCA Workshop (Monywa)	Feb. 4-5, 2003	Monywa Education College, Sagaing Division	3	2	15	49	35	0	**104**
CCA Workshop (Lashio)	Feb. 13-14, 2003	BEHS No. 6, Lashio, Shan State	3	1	4	0	60	0	**68**
CCA Workshop (Yangon)	Aug. 26-27, 2003	Yankin Education College, Yangon Division	7	16	24	23	20	0	**90**
CCA Workshop (Magway)	Sep. 24-25, 2003	Magway Education College, Magway Division	1	0	17	26	57	0	**101**
CCA Workshop (Taunggyi)	Oct. 6-7, 2003	Taunggyi Edcuation College, Shan State	0	2	10	44	61	0	**117**
CCA Workshop (Hakha)	Oct. 11, 2003	BEHS No. 1, Hakha, Chin State	0	1	4	0	42	0	**47**
CCA Workshop (Yangon)	Feb. 6-7, 2004	Yankin Education College, Yangon Division	2	0	29	22	63	0	**116**

Overall Evaluation

Generally speaking, the CCA workshops were successful to motivate local participants and to share significant amounts of information of CCA with them. Most participants answered,

"This workshop is very useful (70.3%)" in evaluations conducted after the workshops. Adding all other positive answers ("considerably useful" and "useful"), the ratio reaches 94.8 %. Among the many items of the workshops, "demonstration lessons" was chosen as the most popular followed by "discussion of CCA." This is because these two items are significantly a new for the participants. The ordinal seminars and workshops here are often in the form of lecture. The demonstration lessons gave the participants vivid and clear images of CCA and the discussion of CCA provided them with a precious opportunity to share their ideas frankly.

Question 1: Is this workshop useful to you?



Note: Total number of respondents: 482

Knowledge Level of CCA

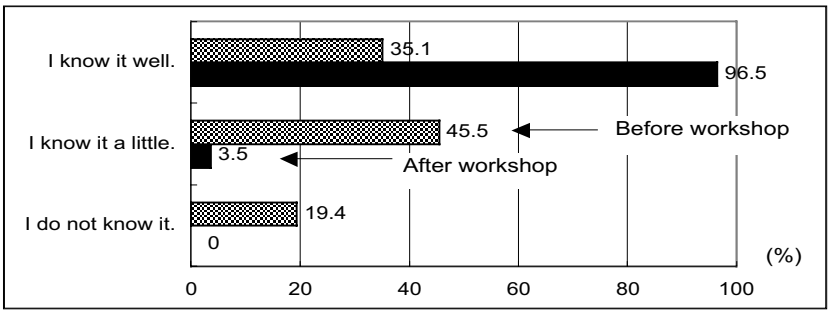
Before the workshop, more than 60% of the participants did not have enough knowledge of CCA even though the idea of CCA had been introduced in 1991 in this country. Among these participants, 19.4% of the participants did not know CCA at all before the workshop. However, the level of CCA knowledge is different from place to place. The participants in Yangon, Magway and Taunggyi know more about CCA relative to the participants in other places. 63.3% of the participants in Magway answered that they already knew CCA well before the workshop. On the other hand, the participants in Hakha, Lashio and Monywa did not know CCA well before the workshop. The ratios of the participants who did not know CCA at all are 41.5%, 33.9% and 31.5% relatively. In the past two years, MBESS had held CCA workshops in Yangon, Magway and Taunggyi several times. On the other hand, in Hakha, Lashio and Monywa, MBESS first time held a CCA workshop and introduced the concept of CCA.

From this result, it can be said that the activity of MBESS has had a significant impact on dissemination of CCA in local areas. The participants who gained knowledge of CCA in the previous workshops might have shared the information with their colleagues in these three places.

When comparing the ratio before the workshop to that after it, the significant improvement of knowledge of CCA can be observed. Even the participants who did not know CCA before gained enough knowledge of CCA through the workshop. Over 60% of the participants who did not know CCA well became knowledgeable after the workshop. Although there are still 3.5% of the participants who felt they still knew little of CCA, these CCA workshops played an important role to enhance CCA knowledge of local personnel. The areas of Magway and

Taunggyi show that all participants understood CCA well after the workshop.

Question 2: How is your knowledge of CCA before and after this workshop?



Note: Total number of respondents: 470 (Before the workshop), 461 (After the workshop)

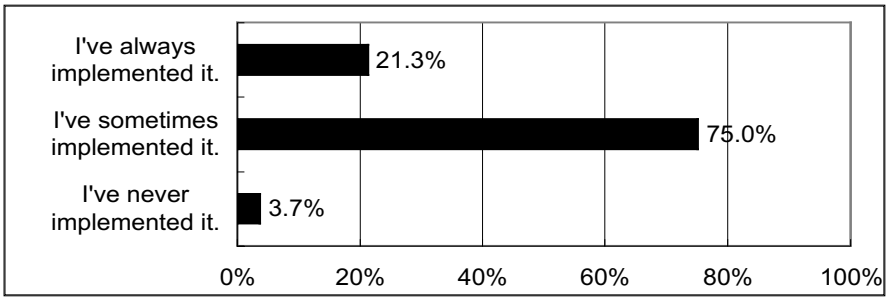
Implementation of CCA

According to the result of the questionnaire, the situation of implementing CCA in local schools seems to be satisfied. 21.3% of the participants answered, "I've always implemented CCA" and 75.0% of the participants answered, "I've sometimes implemented CCA." Only 3.7% of the participants answered, "I've never implement CCA." Judging from only these percentages, it can be said that the level of CCA dissemination is good in Myanmar. However, we should look at these data more carefully and should not be satisfied with it completely.

First, there is a large gap between the ratios of the participants who know CCA well (35.1%) and ones who have always implemented CCA (21.3%). Only 60% of the teachers are actively conducting CCA. Forty percent of the teachers do not implement CCA actively though they already have enough knowledge of CCA. The reasons of difficulties of implementing CCA are "lack of teaching/learning aids," "inadequate classroom space," "insufficient number of teachers," etc.

Secondly, there is a huge gap between the ratios of the participants who do not know CCA at all and ones who have never implemented CCA. These ratios are 19.4% and 3.7% respectively. In the logical and ordinal thinking, teachers who do not know CCA cannot implement CCA. However, these two figures means that approximately 15% of teachers who do not know CCA have implemented CCA in their class. This is a significantly important finding. We should take it seriously and carefully review what it really means. This situation can be obviously seen in the places where MBESS has never approached before. For example, 36.5% of the participants in Hakha who do not know CCA answered that they have implemented CCA. Following Hakha, the ratios of this kind of the participants account for 32.2% in Lashio, 23.5% in Monywa, 12.0% in Dawei, 10.0% in Magway, 4.5% in Yangon, and 2.9% in Taunggyi.

Question 3: How is your CCA implementation before the workshop?



Note: Total number of respondents: 460

Except for one participant in Lashio, all the participants answered, "I want to implement CCA." This is a good trend for further improvement of educational quality in the future. However, some participants (5.3%) answered, "I cannot implement CCA." The main reasons for difficulties of implementing CCA are:

- One teaching period is too short
- Teaching/learning aids are in short supply
- The number of teachers is significantly low compared to the number of students
- The economic situation of schools and teachers is tight
- Teacher's level of understanding of CCA is not high enough
- The level of understanding of CCA in the community and of parents is not high enough
- Majority of the schools do not apply CCA yet

Areawise, Monywa and Hakha show high percentages for difficulty of implementing CCA. Both places account for approximately 12% of which participants answered that implementation of CCA is difficult. The main reasons for such a result are:

- The number of teachers is significantly low compared to the number of students.
- Teacher's level of understanding of CCA is not high enough.

According to these opinions, in order to disseminate CCA, it is necessary to maintain facilities and equipment and also train teachers.

What Did You Learn From The Workshop?

According to their comments, the participants learned many important things during the workshop. The answers are classified into the following:

- Concept of CCA
  - -Difference between Teacher-centered approach and CCA
  - -Effectiveness of CCA in children's education
  - -Enjoyment and interests in CCA lessons

-Higher motivation of children in CCA lessons
-Higher ability and capability of teachers for implementing CCA

- Practice of CCA
  -How to make teaching/learning aids under the limited conditions
  -How to conduct science experiments
  -How to involve children in lessons
  -How to conduct CCA effectively

What Kinds Of Workshops Do You Want In The Future?

A variety of ideas were proposed to MBESS at the end of the workshop. The main ideas are as follows:

- CCA workshops
  -with more demonstration lessons,
  -in different subjects,
  -on a larger scale
- Workshops focusing on teaching methodology,
- Workshops focusing on class management,
- Workshops related to educational and health issues, and
- Workshops related to computer technology.

APPENDIX 7-1: Lists of Participants

Dawei CCA Workshop Participants (14th/15th Jan. 2003)

	Name	Position	Organization
1	U Htein Win	Assistant Inspection Supervisor	Tanintharyi Division Education Office
2	U Than Nyunt	Assistant Supervisor	Tanintharyi Division Education Office
3	U Meyint Aung	Assistant Inspection Supervisor	Tanintharyi Division Education Office
4	U Theen Tin	Township Education Officer	Dawei Township Education Office
5	U Ngwe Win	Assistant Township Education Officer	Dawei Township Education Office
6	U Pin Mg Myint	Assistant Township Education Officer	Haung Hon Township Education Office
7	U Han Sein	Township Education Officer	Yephyu Township Education Office
8	U Khin Hla	Assistant Township Education Officer	Yephyu Township Edcuation Office
9	Daw Shwe Mi	Township Education Officer	Langlone Township Education Office
10	U Myo Lwin	Assistant Township Education Officer	Laung Lone Township Education Office
11	U Tin Oo	Township Education Officer	Thayetchang Township Edcuation Office
12	U Thee Hlaing	Assistant Township Education Officer	Thayetchaung Township Education Office
13	U Mai Aung	Deputy Principal	Dawei Education College
14	Daw Htwe Htwe Tin	Training Officer	Dawei Education College
15	Daw Ni Ni Than	Assistant Lecturer	Dawei Education College
16	Daw Aye Aye Cho	Tutor	Dawei Education College
17	Daw Khin Khin Kyu	Tutor	Dawei Education College
18	Daw Aye Aye Than	Tutor	Dawei Education College
19	Daw Ni Lar	Tutor	Dawei Education College
20	Daw Than Than Hmwe	Tutor	Dawei Education College
21	Daw Mya Mya Soe	Tutor	Dawei Education College
22	Daw Thinn Thinn Mar	Tutor	Dawei Education College
23	Daw Yi Yi Cho	Tutor	Dawei Education College
24	Daw Aye Myint	Tutor	Dawei Education College
25	Daw Khin Myint Than	Tutor	Dawei Education College
26	Daw Khin Than Mu	Tutor	Dawei Education College
27	Daw Naw Varina Loo	Tutor	Dawei Education College
28	Daw Ni Ni Lwin (1)	Tutor	Dawei Education College
29	Daw Ni Ni Lwin (2)	Tutor	Dawei Education College
30	Daw Thwin Oo	Tutor	Dawei Education College
31	Daw Sein Kyi	Tutor	Dawei Education College
32	Daw Mi Than Than Aye	Tutor	Dawei Education College
33	Daw Aye Aye	Tutor	Dawei Education College
34	Daw Thinn Thinn Nyo	Tutor	Dawei Education College
35	U Kyaw Bohn Myint	Head of Primary	Dawei Education College
36	Daw Khin Mar Cho	Tutor	Dawei Education College
37	Daw Khin Thein	Assistant Tutor	Dawei Education College
38	Daw Khine Let Let Kyaing	Assistant Tutor	Dawei Education College
39	Daw Ni Ni Aung	Assistant Tutor	Dawei Education College
40	Daw Hla Kyi	Tutor	Dawei Education College
41	U Pe Win	Tutor	Dawei Education College
42	U Kyi Kai	Tutor	Dawei Education College
43	Daw Kyin Swan	Tutor	Dawei Education College
44	Daw Kyi Kyi Mar	Tutor	Dawei Education College
45	Daw Phyu Phyu Wynn	Tutor	Dawei Education College
46	Naw Faith	Head of Primary School	Yannazu Primary School
47	Daw Than Myint	Head of Primary School	Tatingma Primary School
48	Daw Aye Aye Htay	Head of Primary School	Sanchi Primary School
49	Daw Khin Nyo	Head of Primary School	Daungu Primary School
50	U San Aung	Head of Primary School	Othayan Primary School
51	U Bo Thein	Head of Primary School	Kathann Primary School
52	Daw Myo Myo Oo	Head of Primary School	Kyuntyet Primary School
53	U Than Maung	Head of Primary School	Sanwa Primary School
54	U San Maung	Head of Primary School	Kayetpyin Primary School
55	Daw Po Than	Head of Primary School	Yaungmare Primary School
56	U Thein Tan	Head of Primary School	Paidnaidan Primary School
57	Daw Yin Yin Myint	Head of Primary School	Shanmaleswe Primary School
58	Daw Khin Mat Aye	Head of Primary School	Shanmatwin Primary School
59	Naw Jane Po	Head of Primary School	Shanmaleswe Primary School
60	U Hoe Kyi	Head of Primary School	Myaungpalet Primary School

(Continued)

	Name	Position	Organization
61	U Aung Win	Head of Primary School	Sin Seik Primary School
62	U Tin Htwe	Head of Primary School	Sawmenyo Primary School
63	Daw Wah Wah Khine	Head of Primary School	Zalone Primary School
64	U Than Htike Oo	Head of Primary School	Thapyao Primary School
65	Daw Khin Myint San	Head of Primary School	Saungnimopyin Primary School
66	Daw May Win Kyi	Head of Primary School	Shinmoeteen Primary School
67	U Nyan Win	Head of Primary School	Olotepyin Primary School
68	Daw Lwin Lwin Mya	Head of Primary School	Kyuntyet Primary School
69	Daw Ya Min Nwe	Junior Assistant Teacher	Sawmenyo Primary School
70	Daw Tin Tin Wai	Junior Assistant Teacher	Othayan Primary School
71	Daw Win Win San	Junior Assistant Teacher	Oloet Primary School
72	Daw Aye Aye Thein	Junior Assistant Teacher	Daungu Priamry School
73	Daw Lwin Tar Aung	Primary Assistant Teacher	Zalone Primary School
74	Naw Florence Dee	Junior Assistant Teacher	Kayetpyin Primary School
75	Daw Tin Myo Nwe	Primary Assistant Teacher	Zayit Primary School
76	Naw P' Saw Htee	Primary Assistant Teacher	Shanmaleswe Primary School
77	Naw Eh Ree Win	Junior Assistant Teacher	Kayetpyin (West) Primary School
78	Daw Thu Zar Moe	Junior Assistant Teacher	Myaung Palet Primary School
79	Daw Yee Yee Lwin	Junior Assistant Teacher	Myaung Palet Primary School
80	Daw Khin Khin Thant	Primary Assistant Teacher	Kayetpyin (South) Primary School
81	Daw Ohna Aung	Primary Assistant Teacher	Paitnaitaw Primary School
82	Daw Khin Zar Zar Oo	Primary Assistant Teacher	Kyautmaw Primary School
83	Daw Thet Thet Maw	Junior Assistant Teacher	Hteinhoung Primary School
84	Daw Kyi Kyi Myint	Junior Assistant Teacher	Paitnaitaw Primary School
85	Daw Ah Nlan Yi	Primary Assistant Teacher	Talingtaung Primary School
86	Daw Ni Ni Win	Primary Assistant Teacher	Kathann Priamry School
87	Daw Khin Mu	Primary Assistant Teacher	Kyuntmaw Primary School
88	Daw Tin Tin Pyone	Junior Assistant Teacher	Tatingma Priamry School
89	Daw Myat Thwe	Junior Assistant Teahcer	Nyungyann Primary School
90	Daw Khin Mar Cho	Junior Assistant Teacher	Sanchi Primary Teacher
91	Daw Kay Thi Soe	Primary Assistant Teacher	Talingtaung Primary School
Working Group Members			
1	Daw Myint Myint Than	Senior Teacher	DEPT
2	Daw Thin Thin Aung	Deputy Staff Officer	DEPT
3	Daw Win Thiengi Kyaw	Assistant Lecturer	Thingungyun Education College
4	Daw Khin Saw Hlaing	Primary Teacher	YECPS
5	Daw Mya Mya Thein	Primary Teacher	YECPS
6	Daw Khin Myat Htwe	Primary Teacher	YECPS
MBESS JICA Syudy Team			
1	Mr. Shinji Tajima	General Studies Expert	JICA Study Team
2	Ms. Taeko Kurokawa	General Studies Expert	JICA Study Team

Monywa CCA Workshop Participants (4th/5th Feb, 2003)

No.	Name	Position	Organization
1	U Hla Win Aung	Dy - Director	Department of Basic Education 2
2	Daw Wai Wai Nyunt	Staff Officer	Department of Basic Education 2
3	Daw Cherry Win	Deputy Staff Officer	Department of Basic Education 2
4	U Myint Soe	Division Education Officer	Sagaing Division Education Office
5	U Ngwe Toe	Division Education Officer	Mandalay Division Education Office
6	U Ohn Mg	District Education Officer	Monywa Township Education Office
7	U Thet Shwe	Township Education Officer	Chanug Oo Township Education Office
8	Daw Thaung Tin	Township Education Officer	Butalin Township Education Office
9	U Ko Ko	Township Education Officer	Ayadaw Township Education Office
10	U Khin Mg Ko	Township Education Officer	Kani Township Education Office
11	U Myint	Township Education Officer	Yin Ma Bin Township Edcuation Office
12	U Aye Mg	Township Education Officer	Sa Lin Gyi Township Education Office
13	U Zaw Win	Assistant Township Education Officer	Monywa Township Education Office
14	U Ba Kyawe	Assistant Township Education Officer	Chanug Oo Township Education Office
15	U Tin Oo	Assistant Township Education Officer	Butalin Township Education Office
16	U Ba Ko	Assistant Township Education Officer	Ayadaw Township Education Office
17	U Sake	Assistant Township Education Officer	Kani Township Education Office
18	U Htan Lin	Assistant Township Education Officer	Palae Township Education Office
19	Daw Myint Myint	Assistant Township Education Officer	Yin Ma Bin Township Edcuation Office
20	U kyaw Soe Lin	Assistant Township Education Officer	Sa Lin Gyi Township Education Office
21	Daw Aye Aye Myint	Head of Department	Mandalay Education College
22	Daw Cherry Tun	Assistant Lecture	Mandalay Education College
23	Daw Aye	Assistant Lecture	Mandalay Education College
24	U Htay Aung	Head of Department	Sagaing Education College
25	Daw Yi Yi Mar	Assistant Lecture	Sagaing Education College
26	U Myint Thein	Tutor	Sagaing Education College
27	Daw Than Than	Head of Department	Meiktila Education College
28	U Khin Mg Kyi	Principal	Monywa Education College
29	U Kan Win	Vice Principal	Monywa Education College
30	U Thein Myint	Hear of Department	Monywa Education College
31	U Than Cho	Staff Officer	Monywa Education College
32	U Theim Ngwe	Assistant Lecture	Monywa Education College
33	U Kyin Mg	Assistant Lecture	Monywa Education College
34	U Bo Sham	Assistant Lecture	Monywa Education College
35	Daw Mya San	Assistant Lecture	Monywa Education College
36	Daw Nyein Nyein	Assistant Lecture	Monywa Education College
37	U Nyo Tun	Assistant Lecture	Monywa Education College
38	U Kyaw Myint	Tutor	Monywa Education College
39	Daw San Wai	Tutor	Monywa Education College
40	Daw Khin Mya Win	Tutor	Monywa Education College
41	Daw Aung Aung Than	Tutor	Monywa Education College
42	Daw Khin Nwe Yi	Tutor	Monywa Education College
43	Daw Khin Pyone Wai	Tutor	Monywa Education College
44	U Khin Mg Lin	Tutor	Monywa Education College
45	Daw Khin Cho	Tutor	Monywa Education College
46	Daw Khin Thoung	Tutor	Monywa Education College
47	U Mg Mg	Tutor	Monywa Education College
48	Daw Khin Myint Swe	Tutor	Monywa Education College
49	U Khin Mg Aye	Tutor	Monywa Education College
50	Daw Yi Yi Tint	Tutor	Monywa Education College
51	Daw Khin Aye Thce	Tutor	Monywa Education College
52	Daw Nant May Moe Hnin	Tutor	Monywa Education College
53	Daw Thidar Oo	Tutor	Monywa Education College
54	Daw Khin San Kyawe	Tutor	Monywa Education College
55	U Hla Kyi	Tutor	Monywa Education College
56	U Than Tun	Tutor	Monywa Education College

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57	Daw Win Yi	Tutor	Monywa Education College	
58	Daw Khin Khin Win	Tutor	Monywa Education College	
59	Daw Shwe Zin	Tutor	Monywa Education College	
60	Daw Htar Htar	Tutor	Monywa Education College	
61	Daw Ei Ei Khin	Tutor	Monywa Education College	
62	Daw Myint Myint Htwe	Tutor	Monywa Education College	
63	Daw Yi Yi Win	Tutor	Monywa Education College	
64	Daw Maw Maw Thein	Tutor	Monywa Education College	
65	Daw Yi Yi Win	Tutor	Monywa Education College	
66	Daw Lwin Lwin	Tutor	Monywa Education College	
67	U Zaw Min Tun	Assistant Tutor	Monywa Education College	
68	U Nyi Nyi	Assistant Tutor	Monywa Education College	
69	Daw Than Than Si	Assistant Tutor	Monywa Education College	
70	U Soe Myint	Headmaster	Monywa Education College Practice School	
71	Daw Nywe Nywe Swe	Junior Assistant Teacher	Monywa Education College Practice School	
72	Daw Khin Thu Zar	Primary Assistant Teacher	Monywa Education College Practice School	
73	Daw kyi Sein	Primary Assistant Teacher	Monywa Education College Practice School	
74	U Moe Kyaw	Primary Assistant Teacher	Monywa Education College Practice School	
75	Daw Tin Aung	Headmaster	Sulay Kone	Primary School
76	Daw Khin Win	Headmaster	Cham Mya Thazi	Primary School
77	Daw Cho Cho Aung	Headmaster	Daw Na Chan	Primary School
78	Daw Myint Myint San	Headmaster	Myoma Guard	Primary School
79	Daw Myint San	Headmaster	Kutoh Kone	Primary School
80	Daw Nyan Shwin	Headmaster	Shin Ngar Sel	Primary School
81	U Ngwe Thein	Headmaster	Kha Wae Kyin	Primary School
82	U Myint	Headmaster	Kyauk Sit Done	Primary School
83	Daw Nu Nu Yi	Headmaster	Zaloke	Primary School
84	Daw Mya Mya Thway	Headmaster	Payit Kone	Primary School
85	U Chaw	Headmaster	Hta Naung Taw	Primary School
86	U Tun Than	Headmaster	Leti	Primary School
87	U Ohn Than	Headmaster	Te Gyi Gone	Primary School
88	U Khin Thoung	Headmaster	Than Bote Dai	Primary School
89	Daw Khin Htet Kyaw	Headmaster	Sithu	Primary School
90	Daw Khin San Yi	Junior Assistant Teacher	Mya Thit	Primary School
91	Daw Khin Htay Sint	Primary Assistant Teacher	Aung Chan Tha	Primary School
92	Daw Htay Htay Sint	Junior Assistant Teacher	Yadanapon	Primary School
93	Daw Mya Hlaing	Junior Assistant Teacher	Phone Soe	Primary School
94	Daw Shwe Man Si	Junior Assistant Teacher	Than Lar	Primary School
95	Daw Hla Do	Junior Assistant Teacher	Shank Kla	Primary School
96	Daw Su Su Hlaing	Junior Assistant Teacher	Hle Dan	Primary School
97	Daw Myint Myint Tin	Junior Assistant Teacher	Nyang Pin Zay	Primary School
98	Daw Ohmmar Khin	Junior Assistant Teacher	Pnia Za Tan	Primary School
99	Daw Win May	Junior Assistant Teacher	Guiay Gyi	Primary School
100	Daw Than Than Oo	Junior Assistant Teacher	Ettaw	Primary School
101	Daw Win Win Nwe	Junior Assistant Teacher	Hta Naung Win	Primary School
102	Daw Win Mar	Junior Assistant Teacher	Ma-U	Primary School
103	Daw Mi Mi Tin	Junior Assistant Teacher	Sandan	Primary School
104	Daw Swe Swe Oo	Primary Assistant Teacher	Koe Bin	Primary School
Working Group Members				
1	U Tin Than	Advisor	Yankin Ediucation College	
2	Daw Joanna	Deputy Staff Officer	DEPT	
3	Daw Wai Wai Oo	Assistant Lecturer	Thingungyun Education College	
4	Daw Htar Htar Wai	Assistant Lecturer	Thingungyun Education College	
5	Daw Khin Myat Sint	Assistant Lecturer	Yankin Edcutaion College	
6	Daw Laban Bawk	Junior Teacher	YECPS	
7	Daw Yee Yee Win	Primary Teacher	YECPS	
MBESS JICA Study Team				
1	Mr. Ichiro Miyazawa	Basic Science Expert	JICA Stduy Team	
2	Mr. Yoshitaka Tanaka	Social Studies Expart	JICA Stduy Team	

Lashio CCA Workshop Participants (13th/14th Feb. 2003)

No.	Name	Position	Organization
1	Daw Kyin Swe	Deputy Staff Officer	Department of Basic Education 2
2	Daw San San Aye	Deputy Staff Officer (Curriculum)	Department of Basic Education 2
3	Daw Mi Mi Kyine	Dy. Director	Department of Basic Education 2
4	U Than Nyunt	Assistant (Inspection)	State Education Office
5	Daw Hnnin Kyi	Township Education Officer	Lashio Township Edcuation Office
6	U Kyaw San	ATEO	Lashio Township Edcuation Office
7	Daw Nan Mya Lonn	Township Education Officer	Theinni Township Education Office
8	U Sai Myo Nyunt	ATEO	Theinni Township Education Office
9	Daw Yin Kyi	Headmistress	State Primary School (16)
10	Daw San New	Headmistress	State Primary School (29), Lashio
11	Daw Nan Saw Hlaing	Headmistress	State Primary School, Taingyet, Theinni
12	Daw Myint Myint San	Primary Teacher	State Primary School (12), Lashio
13	Daw Yu Yu	Junior Teacher	State Primary School (24), Lashio
14	Daw Mar Mar Oo	Junior Teacher	State Primary School, Kharshi
15	Daw Zaun Naw	Primary Teacher	State Primary School, Namhuu
16	U Myint Aye	Headmaster	State Primary School, Narkhone, Theinni
17	Daw Nan Shwe Hla	Headmistress	State Primary School (1), Lashio
18	Daw Nan Laung Kham	Headmistress	State Primary School (19), Lashio
19	Daw Nan Aye Kyu	Headmistress	State Primary School, Hopeit, Lashio
20	Daw Nan Hla Htay	Headmistress	State Primary School, Konenyaung, Lashio
21	Daw Aye Aye Thin	Junior Teacher	State Primary School (13), Lashio
22	Daw Nar Khu	Primary Teacher	State Primary School, Thanlwin, Lashio
23	Daw Myint Myint Htwe	Primary Teacher	State Primary School, Lwoihtwem, Lashio
24	U Thaung Kyi	Headmaster	State Primary School (12), Lashio
25	U Mai Hla Kyaw	Headmaster	State Primary School, Saingkaung, Theinni
26	Daw San Kyi	Headmistress	State Primary School (4), Lashio
27	Daw Aye Aye Myint	Headmistress	State Primary School (23), Lashio
28	Daw Htay Win	Headmistress	State Primary School, Tarpon, Lashio
29	Daw Nan Hla Kyi	Junior Teacher	State Primary School (1), Lashio
30	Daw Thin Thin Mar	Junior Teacher	State Primary School (15), Lashio
31	Daw Aye Aye Than	Junior Teacher	State Primary School (26), Lashio
32	Daw Gya Ya	Primary Teacher	State Primary School, Mun-ai, Lashio
33	Daw Sone Te	Primary Teacher	State Primary School, E Nai, Lashio
34	U Khin Maung Tint	Headmaster	State Primary School, E Nai, Lashio
35	U Sai Kyaw Khine	Primary Teacher	State Primary School, Narsaw, Theinni
36	Daw Khin Sein	Headmistress	State Primary School (6), Lashio
37	Daw Naw Law Ya	Headmistress	State Primary School (24), Lashio
38	Daw San San Oo	Headmistress	State Primary School, Kharshi, Lashio
39	Daw Nan May May Khin	Junior Teacher	State Primary School (4), Lashio
40	Daw Cho Cho Aye	Junior Teacher	State Primary School (16), Lashio
41	Daw Nein Bauk	Junior Teacher	State Primary School (29), Lashio
42	Daw Khawn Htwe	Headmistress	State Primary School (11), Lashio
43	Daw Aye Kyi	Headmistress	State Primary School (13), Lashio
44	Daw Khin Chit Yee	Headmistress	State Primary School (25), Lashio
45	Daw Lin Lin Latt	Headmistress	State Primary School, Thanlwin, Lashio
46	Daw Phyu Phyu Wai	Junior Teacher	State Primary School (6), Lashio
47	Daw Aye Aye Myint	Junior Teacher	State Primary School (19), Lashio
48	Daw Win Win Thant	Primary Teacher	State Primary School, Hopeit, Lashio
49	Daw Nan Moon Sein	Headmistress	State Primary School (4), Theinni
50	Daw Nan Thin Thin Myaing	Primary Teacher	State Primary School, Khamteim, Theinni

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No.	Name	Position	Organization
51	U Than Shwe Oo	Headmaster	State Primary School, Namamee, Lashio
52	U Soe Nyunt Aung	Headmaster	State Primary School, Loiloim
53	Daw Khin San	Headmistress	State Primary School (15), Lashio
54	Daw Nan Hla Tin	Headmistress	State Primary School (26), Lashio
55	Daw Nan Khan Ein	Headmistress	State Primary School, Sonekwe, Lashio
56	Daw Khin May Hnin	Junior Teacher	State Primary School (11), Lashio
57	Daw Khin Myint Thwin	Primary Teacher	State Primary School (23), Lashio
58	Daw Tin Tin New	Junior Teacher	State Primary School, Tarpon, Lashio
59	Daw Nyunt Nyunt Sein	Junior Teacher	State Primary School, Sonekwe, Lashio
60	Daw Nan Khan Aung	Headmistress	State Primary School, Maingpar, Theinni
61	U Lwame Zay	Headmaster	State Primary School, Mun-ai, Lashio
62	Daw Khin Hla Myo	Primary Teacher	State Primary School (25), Lashio
63	Daw Ohnmar Aye	Junior Teacher	State Primary School (1), Lashio
64	Daw Nan Ein	Primary Teacher	State Primary School, Taungmyo, Theinni
65	Daw Lu Nan	Primary Teacher	State Primary School (2), Theinni
66	Daw Nan Nyein Nyein Htwe	Junior Teacher	Makonenyaung, Lashio
67	Daw Win Nu	Headmaster	State Primary School, Namhuu, Lashio
68	Daw Nan Myint Htwe	Primary Teacher	State Primary School, Namamee, Lashio
Working Group Members			
1	U Tin Than	Advisor	Yankin Education College
2	Daw Htay Htay Han	Senior Teacher	DEPT
3	Daw Nu Nu Yee	Assistant Lecturer	Yankin Education College
4	Daw Aye Aye Cho	Assistant Lecturer	Yankin Education College
5	Daw Mu Mu	Assistant Lecturer	Thingungyun Education College
6	Daw Kyu Kyu Aye	Assistant Lecturer	Thingungyun Education College
7	Daw Than Than Aye	Junior Teacher	YECPS
8	Daw Cho Cho Win	Junior Teacher	YECPS
MBESS JICA Study Team			
1	Mr. Yoshitaka Tanaka	Social Studies Expert	JICA Study Team
JICA Staff			
1	Ms. Yoshika Hirata	Project Formulation Officer	JICA Myanmar Office

Yangon CCA Workshop Participants (26th/27th Aug. 2003)

No	NAME	POSITION	INSTITUTION
	SPECIAL GUESTS		
1	U Bo Win	Director General	DEPT
2	U Tin Nyo	Director General	DBE(1)
3	Lt. Col. Win Htein	Director General	DBE(2)
4		Director General	DBE(3)
5	U Myint Han	Chairman	MERB
6	Dr. Khin Zaw	Rector	IOE(Yangon)
7	U Tun Hla	Deputy Director General	DEPT
8	U C. Thang Za Tuan	Deputy Director General	DBE(1)
9	U Aye Myint	Deputy Director General	DBE(3)
10	U Myat Naing	Senior Education Research Officer	MERB
11	Daw Htoo Htoo Aung	Professor	IOE(Yangon)
12	U Win Aung	Project Officer	UNICEF
	LOCAL PARTICIPANTS		
1	Daw Myint Myint Than	Director	DEPT
2	U Win Kyi	Director	DEPT
3	Daw Khin Thein Myint	Staff Officer	DBE(1)
4	Daw Thin Thin May	Deputy Staff Officer (Teaching)	DBE(2)
5	Daw May Thet Tin	Deputy Staff Officer	DBE(3)
6	Daw Htin Mo Mo Khine	Deputy Staff Officer	DBE(3)
7	Daw Zin Zin Win	Tutor	IOE(Yongon)
8	Daw Tin Mya	Assistant Supervisor	Kachin State
9	U Saw Htoo Wah	Assistant Inspection School	Kayah State
10	U Hla Thein	Assistant Inspection School	Kayin State
11	U Soe Myint	Inspection School	Chin State
12	U Htain Win	Inspection School	Sagaing Division
13	U Than Nyunt	Assistant Supervisor (PE)	Taninthayi Division
14	U Saw Shi sho	Assistant Inspection School	Bago Division (East)
15	Daw Htwa Tin	Assistant Inspection School	Bago Division (West)
16	U Myint Swe	Inspection School	Magway Division
17	Daw Khin Pyone Win	Assistant Inspection School	Mandalay Division
18	U Khin Mg Mg	Assistant Inspection School	Mon State
19	Daw Saw May	Assistant Inspection School	Rakine State
20	Daw Cho Cho Thein	Assistant State Education Officer	Shan State (South)
21	Daw Aye	Assistant Inspection School	Shan State (Nouth)
22	U Sein Mg Nyunt	Assistant Supervisor	Shan State (East)
23	U Ye Pe	Assistant Inspection School	Ayeyawady Division
24	Daw Than Than Hla	Principal	Myitkyina Education College
25	Daw Nu Nu Yi	Principal	Hpa-an Education College
26	U Khin Maung Kyi	Principal	Monywa Education College
27	Daw Khin Myat Myat	Principal	Sagaing Education College
28	U Mei Aung	Principal	Dawei Education College
29	Daw Kyi Myaing	Principal	Taungoo Education College
30	Daw Khin Khin	Principal	Pyay Education College
31	U Tin San	Principal	Magway Education College
32	U Sein Win	Principal	Pakokku Education College
33	Daw Khin Aye Lwin	Principal	Meiktila Education College
34	U Thin Mg Than	Principal	Mandalay Education College
35	Daw Yin Yin Myat	Principal	Mawlamyine Education Collegemm
36	Daw Mya Mya Kyi	Principal	Taunggyi Education College
37	U Yan Naing	Principal	Yankin Education Collegem
38	Daw Tin May Win	Principal	Thingangyun Education College
39	U Hla Myint	Principal	Hlegu Education College
40	Daw Tin Tin Hlaing	Principal	Kyauk Phyu Education College
41	Daw Si Si	Principal	PatheinEducation Collegem
42	Daw Khin Khin Lay	Principal	Bogalay Education College
43	Daw San Myint	Principal	Myaung Mya Education College
44	Daw Khin Htar Myint	Head of Training Department	Yankin Education College
45	Daw Cho Cho	Head of Training Department	Thingangyun Education College
46	Daw Khin Ohn Lynn	Head of Training Department	Hlegu Education College
47	U Than Hlaing	TEO	1.Dala (SCCA model T)
48	U Ba Thein	ATEO	1.Dala (SCCA model T)
49	Daw Khin Aye Kyu	TEO	2.Gyobingauk(SCCA model T)

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No	NAME	POSITION	INSTITUTION
50	U Kyi	TEO	3.Chanmyatharzi(SCCA model T)
51	U Hla Thein	TEO	1.Yankin
52	U Kan Gyi	ATEO	1.Yankin
53	U Khin Than	TEO	2.Lan-ma-daw
54	U Mya Hlaing	ATEO	2.Lan-ma-daw
55	U Aye Lwin	TEO	3.Kyee-myin-daing
56	U Thi Hla	ATEO	3.Kyee-myin-daing
57	Daw Kyu Kyu Shwe	TEO	4.Hlaing
58	U Sein Myint	ATEO	4.Hlaing
59	U Myint Thein	ATEO	5.Mingalar Taung Nyunt
60	Daw Khin San Yi	Headmistress	5.Mingalar Taung Nyunt
61	U Ohn Mg	TEO	6.Tarmwe
62	U Win Htin	ATEO	6.Tarmwe
63	U Kyin Aung	TEO	7.Botahtaung
64	U Ye Myint	ATEO	7.Botahtaung
65	U Tha Win	TEO	8.Ahlone
66	U Kyi Nyunt	ATEO	8.Ahlone
67	U Win Maw	TEO	9.Sanchaung
68	U Thein Mg	ATEO	9.Sanchaung
69	U Khin Win	ATEO	10.Twante
70	U Kyin Sa	ATEO	10.Twante
71	Daw Yin Yin Nwe	Head	YECPS
72	Daw Htay Htay Win	PAT	YECPS
73	Daw Win Kyi	Head	BEMS No.1(Lan-ma-daw)
74	Daw Mya Mya Win	JAT	BEMS No.1(Lan-ma-daw)
75	Daw Khin Wint Aye Aye	Head	BEPS No.6(Kyee-myin-daing)
76	Daw Hla Hla Myat	PAT	BEPS No.6(Kyee-myin-daing)
77	U Aye	Head	BEPS (Hlaing)
78	Daw Win Win Nyunt	JAT	BEPS (Hlaing)
79	Daw San San	Head	BEPS (Mingalar Taung Nyunt)
80	Daw Khin Khin Lay	JAT	BEPS (Mingalar Taung Nyunt)
81	Daw Nu Nu Wai	Head	BEPS (Tarmwe)
82	Daw San San Htay	PAT	BEPS (Tarmwe)
83	Daw San San Aye	PAT	BEPS (Botahtaung)
84	U Win Naing	Head	BEPS (Botahtaung)
85	Daw Than Myint	Head	BEPS (Ahlone)
86	Daw Ciin Hau Niang	PAT	BEPS (Ahlone)
87	U Tin Tun	Head	BEPS (Sanchaung)
88	Daw Khin Htay	PAT	BEPS (Sanchaung)
89	U Mya Than	Head	BEPS (Dala)
90	Daw Myint Khin	PAT	BEPS (Dala)
	WORKING GROUP MEMBERS		
1	Daw Myint Myint Than	Senior Teacher (Chemistry)	DEPT
2	Daw Thin Thin Aung	Deputy Staff Officer (Life Skill)	DEPT
3	Daw Win Win Aung	Junior Teacher (Life Skill)	DEPT
4	Daw Aye Win Kyi	Deputy Staff Officer (Moral and Civics)	DEPT
5	Daw Tin Moe Wai	Primary Teacher (Life Skill)	DEPT
6	Daw Tin Tin Yi	Assistant Lecturer (Geography)	YEC
7	Daw Thida Hlaing	Assistant Lecturer (Physical Education)	YEC
8	Daw Win Thiengi Kyaw	Assistant Lecturer	TEC
9	Daw Mya Mya Thein	Primary Teacher	YECPS
10	Daw Khin Myat Htwe	Primary Teacher	YECPS
11	Daw Myo Sandar Aye	Primary Teacher	BEMS (1) Lanmadaw
12	Daw Nwe Nwe Aye	Deputy Staff Officer (Mathematics)	DBE3
13	Daw Joanna	Deputy Staff Officer (Basic Science)	DEPT
14	Daw Khin Sandar Lwin	Senior Teacher (Basic Science)	DEPT
15	Daw Wai Wai Oo	Assistant Lecturer (Science)	TEC
16	Daw Htar Htar Wai	Assistant Lecturer (Physics)	TEC
17	Daw Ni Ni Aye	Deputy Staff Officer (Chemistry)	DEPT
18	Daw Khin Myat Sint	Assistant Lecturer (Physics)	YEC
19	Daw Laban Bawk	Junior Teacher	YECPS
20	Daw Yee Yee Win	Primary Teacher	YECPS

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No	NAME	POSITION	INSTITUTION
21	Daw Khin Cho Myint	Assistant Lecturer	YEC
22	Daw Khin Mya Nu	Senior Teacher (Basic Science)	DEPT
23	U Tin Than	Advisor of MBESS	DEPT
24	Daw Ni Ni San	Assistant Research Officer	MERB
25	Daw Htay Htay Han	Senior Teacher (Social Studies)	DEPT
26	Daw Khin Win Myint	Deputy Staff Officer (Social Studies)	DEPT
27	Daw Tin Mar Wei	Deputy Staff Officer (History)	DEPT
28	Daw Khin Than Win		
29	Daw Hla Hla Htay		
30	Daw Thein Thein Yee	Senior Teacher (Geography)	DEPT
31	Daw Nu Nu Yee	Primary Teacher (Geography)	DEPT
32	Daw Aye Aye Cho	Assistant Lecturer (Educational Psychology)	YEC
33	Daw Kyu Kyu Aye	Assistant Lecturer (History)	TEC
34	Daw Cho Cho Win	Junior Teacher (History)	YECPS
35	Daw Than Than Aye	Junior Teacher (Geography)	YECPS
36	Daw Win Win Myint	Deputy Staff Officer (Social Studies)	DBE1
37	Daw Cho Cho Oo	Head of Training Department	Mawlamyine EC
38	Daw Khin Sein Win	Assistant Lecturer (English)	YEC
39	Daw Aye Aye Win	Assistant Lecturer (English)	YEC
40	Daw Hnin Si	Assistant Lecturer (Agriculture)	YEC
41	Daw Tin Tin Shu	Assistant Director (Computer)	DEPT
JICA PROJECT SIDE			
1	Norimichi Toyomane	Team Leader	JICA Study Team
2	Ichiro Miyazawa	Basic Science 2	JICA Study Team
3	Yoshitaka Tanaka	Social Studies 1	JICA Study Team
4	Sawa Hosokawa	Social Studies 2	JICA Study Team
5	Shinji Tajima	General Studies 1	JICA Study Team
6	Yoko Komatsubara	Project Administration	JICA Study Team
7	Tomoko Masuda	SCCA project	SCCA project

Magway CCA Workshop Participants (24th/25th Sept. 2003)

	Name	Position	Organization
1	Daw Thin Thin May	Dy Staff Officer	DEB 2
2	U Tin San	Principal	Magway Education College
3	Daw Tin Tin Nyunt	Head of Department	Magway Education College
4	Daw Myint Myint Than	Head of Department	Magway Education College
5	U Nyunt Wai	Assistant Lecturer	Magway Education College
6	Daw Khin Nyo Win	Assistant Lecturer	Magway Education College
7	Daw Nu Nu Aye	Assistant Lecturer	Magway Education College
8	Daw Tin Htay Nu	Tutor	Magway Education College
9	Daw Khaing Khaing Win	Tutor	Magway Education College
10	Daw Khin Win Kyi	Tutor	Magway Education College
11	Daw Myin Myint Swe	Assistant Lecturer	Magway Education College
12	U Thein Aung	Assistant Lecturer	Magway Education College
13	U Sein Myint	Assistant Lecturer	Magway Education College
14	Daw Tin Tin Yi	Assistant Lecturer	Magway Education College
15	Daw Mya Mya Thein	Tutor	Magway Education College
16	U Khin Maung Kyin	Tutor	Magway Education College
17	U Kyi Tin	Tutor	Magway Education College
18	U Kyaw Kyaw Naing	Primary Assistant Teacher	Magway Township
19	U Myo Zaw Oo	Primary Assistant Teacher	Magway Township
20	Daw Tin Myo	Primary Head	Magway Township
21	Daw Htay Htay	Junior Assistant Teacher	Magway Township
22	Daw Cho Sint Yin	Junior Assistant Teacher	Magway Township
23	Daw Than Than Oo	Primary Assistant Teacher	Magway Township
24	U Myint Swe	School Inspection	Magway Township
25	U Kyaw Lwin	Township Education Officer	Magway Division Office
26	U Tin Aung	Assistant Township Education Officer	Magway Township
27	Daw War War Myint	Primary Assistant Teacher	Magway Township
28	Daw Khine Khine Aye	Primary Assistant Teacher	Magway Township
29	Daw Thaint Thaint Minn	Primary Assistant Teacher	Magway Township
30	Daw Khin San Yu	Primary Head	Magway Township
31	Daw Myo Ma Ma Thein	Primary Head	Magway Township
32	U Zaw Mya Aung	Primary Head	Magway Township
33	U Khin Maung Lwin	Assistant Township Education Officer	Taungdwingyi Township
34	U Aye Hlaing	Primary Head	Taungdwingyi Township
35	U Thaung Sein	Junior Assistant Teacher	Taungdwingyi Township
36	U Nyein Maung	Primary Head	Taungdwingyi Township
37	U Win Naing	Junior Assistant Teacher	Taungdwingyi Township
38	U Aung Kyi Tun	Assistant Township Education Officer	Chauk Township
39	U Than Maung	Primary Head	Chauk Township
40	U Nay Myo Aung	Primary Head	Chauk Township
41	Daw Thet Nwe Htay	Primary Assistant Teacher	Chauk Township
42	Daw Aye Aye Maw	Primary Assistant Teacher	Chauk Township
43	U Win Tint	Primary Head	Natmauk Township
44	U Myo Nyunt	Assistant Township Education Officer	Natmauk Township
45	Daw Win Mar Moe	Primary Assistant Teacher	Natmauk Township
46	Daw Khin Oo	Township Education Officer	Natmauk Township
47	Daw Sein Kyi	Primary Head	Natmauk Township
48	Daw Than Than Moe	Primary Assistant Teacher	Natmauk Township
49	U Htay	Assistant Township Education Officer	Seikphyu Township
50	U Tun Saung	Primary Head	Seikphyu Township
51	U Myo Win	Primary Head	Seikphyu Township
52	U Myo Myint Aung	Primary Assistant Teacher	Seikphyu Township
53	U Thaung Soe	Primary Assistant Teacher	Seikphyu Township
54	U Tin Sein	High School Head	Myothit Township
55	U Htay	Assistant Township Education Officer	Myothit Township
56	U Aung Min	Primary Head	Myothit Township
57	U Tin Maung Win	Primary Head	Myothit Township
58	Daw Aye Aye Yi	Primary Assistant Teacher	Myothit Township
59	Daw Khin Myo Latt	Primary Assistant Teacher	Myothit Township
60	U Than Myint	Township Education Officer	Yenanchaung Township

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	Name	Position	Organization
61	U Thein Su	Assistant Township Education Officer	Yenanchaung Township
62	U Myo Thant	Primary Head	Yenanchaung Township
63	Daw Aye Myint Khin	Primary Head	Yenanchaung Township
64	U Yi Lwin	Primary Assistant Teacher	Yenanchaung Township
65	Daw Thida	Primary Assistant Teacher	Yenanchaung Township
66	U Soe Tint	Assistant Lecturer	Pakkoku Education College
67	U Tin Sint	Tutor	Pakkoku Education College
68	Daw Htay Win	Tutor	Pakkoku Education College
69	Daw Cho Cho Win	Tutor	Pakkoku Education College
70	Daw Than Than	Tutor	Pakkoku Education College
71	Daw Kyi Kyi Swe	Assistant Lecturer	Pakkoku Education College
72	Daw Mya Thi	Tutor	Pakkoku Education College
73	Daw Khin Win Yi	Tutor	Pakkoku Education College
74	Daw Khin Myint	Tutor	Pakkoku Education College
75	Daw Khin Swe Oo	Tutor	Pakkoku Education College
76	U Win Maung	Primary Head	Pakkoku Township
77	U Toe	Junior Assistant Teacher	Pakkoku Township
78	U Aung Tin	Assistant Township Education Officer	Pakkoku Township
79	U Sein Nyunt	Primary Head	Pakkoku Township
80	Daw Hla Nyein	Primary Head	Pakkoku Township
81	Daw Mya Thaung	Primary Head	Pakkoku Township
82	Daw Tin Shwe	Primary Assistant Teacher	Pakkoku Township
83	U Thaung Swe	Township Education Officer	Pakkoku Township
84	Daw Hla Hla Thein	Junior Assistant Teacher	Pakkoku Township
85	Daw Tin Tin Win	Junior Assistant Teacher	Pakkoku Township
86	U Swe Naing	Primary Head	Pauk Township
87	Daw Pike Htwe	Primary Head	Pauk Township
88	Daw Myat Toe Kyi	Primary Assistant Teacher	Pauk Township
89	Daw Khin Soe Soe	Primary Assistant Teacher	Pauk Township
90	Daw Khin Aye Swe	Township Education Officer	Yesagyo Township
91	U Mya	Assistant Township Education Officer	Yesagyo Township
92	U Thant Sin Oo	Primary Head	Yesagyo Township
93	U Myo Myint	Primary Head	Yesagyo Township
94	Daw Soe Moe Win	Primary Assistant Teacher	Yesagyo Township
95	Daw Khine Zar Win	Primary Assistant Teacher	Yesagyo Township
96	U Kyaw Maung	Township Education Officer	Myaing Township
97	U Ye Myint Aung	Assistant Township Education Officer	Myaing Township
98	U Thit Lwin	Primary Assistant Teacher	Myaing Township
99	U Nyi	Primary Head	Myaing Township
100	U Kyaw Zan	Primary Head	Myaing Township
101	U Ko Ko	Primary Assistant Teacher	Myaing Township
MBESS Member			
1	Daw Joannna	Deputy Staff Officer	DEPT
2	Daw Khin Myant Sint	Assistant Lecturer	YEC
3	Daw Htar Htar Wai	Assistant Lecturer	TEC
4	Daw Khin Sanda Lwin	Senior Teacher	DEPT
5	Daw Yee Yee Win	Primary Teacher	YECPS
JICA Study Team			
1	Ichiro Miyazawa	MBESS	JICA Study Team

Taunggyi CCA Workshop Participants (6th/7th Oct. 2003)

	Name	Position	Organization
1	Daw Amy Hla	Junior Assistant Teacher	Taunggyi Township
2	Daw Pyone Yee	Primary Head	Taunggyi Township
3	U Tin Kyaw Win	Primary Head	Taunggyi Township
4	Daw Tin Aye	Junior Assistant Teacher	Taunggyi Township
5	Daw Aye Myint	Primary Head	Taunggyi Township
6	Daw May Wah Oo	Junior Assistant Teacher	Taunggyi Township
7	Daw Lwan Kyin	Primary Head	Taunggyi Township
8	Daw Cynthia Pan	Junior Assistant Teacher	Taunggyi Township
9	Daw Nang Eh Aung	Junior Assistant Teacher	Taunggyi Township
10	Daw Nang Hlaing Hlaing	Primary Head	Taunggyi Township
11	U Hla Thein	Township Education Officer	Taunggyi Township
12	U Shwe Mann	Assistant Township Education Officer	Taunggyi Township
13	Daw Sao Than Kyi	Head of Department (Training)	Taunggyi Education College
14	Daw Htoo Htoo Shwe	Head of Department (Academic)	Taunggyi Education College
15	Daw Khin Myint Thein	Assistant Lecturer	Taunggyi Education College
16	Daw Lwin Lwin Cho	Assistant Lecturer	Taunggyi Education College
17	Daw Khin San Kyi	Assistant Lecturer	Taunggyi Education College
18	Daw Khin Moe Kyi	Assistant Lecturer	Taunggyi Education College
19	Daw Naw Eh Htoo	Assistant Lecturer	Taunggyi Education College
20	Daw Nang Phyu Phoung	Assistant Lecturer	Taunggyi Education College
21	Daw Aye Aye Tint	Assistant Lecturer	Taunggyi Education College
22	Daw Win May	Assistant Lecturer	Taunggyi Education College
23	U Soe Myint	Assistant Lecturer	Taunggyi Education College
24	U Maung Sein	Assistant Lecturer	Taunggyi Education College
25	Daw Tin Tin Htoo	Tutor	Taunggyi Education College
26	Daw Yin Nu	Tutor	Taunggyi Education College
27	Daw Aye Thiri Oo	Tutor	Taunggyi Education College
28	Daw Soe Soe (Maths)	Tutor	Taunggyi Education College
29	Daw May May Htwe	Tutor	Taunggyi Education College
30	Daw Nang Myint Kyi	Tutor	Taunggyi Education College
31	Daw Soe Soe (Physics)	Tutor	Taunggyi Education College
32	Daw Hnin Thida Soe	Tutor	Taunggyi Education College
33	Daw Khin Kaythi Soe	Tutor	Taunggyi Education College
34	Daw Myat Thinzar Kyaw	Tutor	Taunggyi Education College
35	Daw Thuzar	Tutor	Taunggyi Education College
36	Daw Sao Myat Mon	Tutor	Taunggyi Education College
37	Daw Khin Thida Win	Tutor	Taunggyi Education College
38	Daw Cherry Kyi	Tutor	Taunggyi Education College
39	Daw Kai San	Tutor	Taunggyi Education College
40	Daw Htay Myint	Tutor	Taunggyi Education College
41	Daw Nang Aye Aye Cho	Tutor	Taunggyi Education College
42	Daw Khin Win Kyi	Tutor	Taunggyi Education College
43	Daw War War Naing	Tutor	Taunggyi Education College
44	Daw Khin Swe Win	Tutor	Taunggyi Education College
45	U Win Oo	Tutor	Taunggyi Education College
46	U Tun Tun Oo	Assistant Tutor	Taunggyi Education College
47	U Kyi Maung	Primary Head	Taunggyi Township
48	Daw Khin San Win	Junior Assistant Teacher	Taunggyi Township
49	Daw Ohn Nyunt	Junior Assistant Teacher	Taunggyi Township
50	U Sein Aung	Primary Assistant Teacher	Taunggyi Township
51	Daw Mar Mar Aye	Primary Assistant Teacher	Taunggyi Township
52	Daw Aye Aye	Primary Assistant Teacher	Taunggyi Township
53	Daw Nilar Khin	Junior Assistant Teacher	Taunggyi Township
54	Daw Myat Myat Aye	Assistant Librarian	Taunggyi Education College
55	Daw Mu Mu Oo	Programmer	Taunggyi Education College
56	Daw Mian Lain Htung	Tutor	Taunggyi Education College
57	Daw Me Me Aung	Tutor	Taunggyi Education College
58	Daw Yee Yee Myint	Tutor	Taunggyi Education College
59	Daw Nyo Nyo	Tutor	Taunggyi Education College
60	U Ko Ko	Tutor	Taunggyi Education College

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	Name	Position	Organization
61	U Maung Pyant	Tutor	Taunggyi Education College
62	Daw Ni Ni Win	Assistant Tutor	Taunggyi Education College
63	Daw Khin Thein Win	Junior Assistant Teacher	Taunggyi Township
64	Daw Kyi Kyi Myint	Primary Assistant Teacher	Taunggyi Township
65	Daw Aye Aye Nyein	Primary Assistant Teacher	Taunggyi Township
66	Daw Win Thant	Primary Assistant Teacher	Taunggyi Township
67	Daw Cho Cho Thein	Assistant State Education Officer	Shan state office
68	U Htay Lwin	Assistant State Education Officer	Shan state office
69	Daw Mya Mya Kyi	Principal	Taunggyi Education College
70	Daw Tin Myint Khin	Primary Head	Hopone Township
71	Daw Khin Than Aye	Primary Head	Hopone Township
72	U Soe Than	Township Education Officer	Hopone Township
73	U Soe Myint	Primary Head	Hopone Township
74	U Tin Aung	Primary Head	Hopone Township
75	U Nyunt Win	Junior Assistant Teacher	Hopone Township
76	U Thet Naing	Junior Assistant Teacher	Hopone Township
77	Daw Sein Oo	Junior Assistant Teacher	Hopone Township
78	Daw Mya Oo	Junior Assistant Teacher	Hopone Township
79	Daw Nang Thin Thin Oo	Junior Assistant Teacher	Hopone Township
80	U Thein Kywai	Assistant Township Education Officer	Hopone Township
81	U Maung Win	Primary Head	Hopone Township
82	U Sai Aung Phyo	Assistant Township Education Officer	Nyaung Shwe Township
83	U Ko Ko	Assistant Township Education Officer	Nyaung Shwe Township
84	Daw San San Win	Primary Head	Nyaung Shwe Township
85	Daw Pyone Cho Kyi	Primary Head	Nyaung Shwe Township
86	Daw Hla Sein	Primary Head	Nyaung Shwe Township
87	Daw Hla Hla	Primary Head	Nyaung Shwe Township
88	Daw Moe Moe Aye	Primary Head	Nyaung Shwe Township
89	Daw Khin Mar Thein	Primary/Junior Assistant Teacher	Nyaung Shwe Township
90	Daw Mya Mya Win	Primary Assistant Teacher	Nyaung Shwe Township
91	U Tin Win Sint	Junior Assistant Teacher	Nyaung Shwe Township
92	Daw Kyu Kyu Win	Primary/Junior Assistant Teacher	Nyaung Shwe Township
93	Daw Khin Mar Aye	Primary/Junior Assistant Teacher	Nyaung Shwe Township
94	Daw Tin May Win	Township Education Officer	Kalaw Township
95	U Maung Maung Aye	Assistant Township Education Officer	Kalaw Township
96	Daw Kyu Kyu Than	Primary Head	Kalaw Township
97	Daw Sakinar	Primary Head	Kalaw Township
98	Daw Sein Sein	Primary/Junior Assistant Teacher	Kalaw Township
99	Daw Thin Thin Hlaing	Primary/Junior Assistant Teacher	Kalaw Township
100	Daw Yi Yi Wynn	Primary/Junior Assistant Teacher	Kalaw Township
101	U Win Hlaing	Primary Head	Kalaw Township
102	Daw Sandar Oo	Primary/Junior Assistant Teacher	Kalaw Township
103	Daw Htar Htar Aye	Primary/Junior Assistant Teacher	Kalaw Township
104	U Soe Win	Primary Head	Kalaw Township
105	Daw Yee Yee	Primary Head	Kalaw Township
106	Daw M Jar Nan	Primary Head	Yat Sauk Township
107	Daw Tin Tin Sein	Primary Head	Yat Sauk Township
108	Daw Khin May Win	Primary Head	Yat Sauk Township
109	Daw Kyi Kyi Tin	Primary/Junior Assistant Teacher	Yat Sauk Township
110	Daw Myint Myint Sein	Primary Head	Yat Sauk Township
111	Daw Cho Cho Min	Primary/Junior Assistant Teacher	Yat Sauk Township
112	Daw Myint Myint Htwe	Primary Assistant Teacher	Yat Sauk Township
113	U Khin Maung Ko	Township Education Officer	Yat Sauk Township
114	Daw Ni Ni Aung	Primary Head	Yat Sauk Township
115	Daw Soe Soe Nwe	Primary Head	Yat Sauk Township
116	Daw Khin Htay	Primary/Junior Assistant Teacher	Yat Sauk Township
117	U Latt Aung	Assistant Township Education Officer	Yat Sauk Township
MBESS Member			
1	Daw Joannna	Deputy Staff Officer	DEPT
2	Daw Wai Wai Oo	Assistant Lecturer	YEC
3	Daw Ni Ni Aye	Deputy Staff Officer	DEPT
4	Daw Khin Mya Nu	Senior Teacher	DEPT
5	Daw Laban Bawk	Junior Teacher	YECPS
6	Daw Khin Cho Myint	Assistant Lecturer	YEC
JICA Study Team			
1	Ichiro Miyazawa	MBESS	JICA Study Team

Hakha CCA Workshop Participants (11th October, 2003)

No.	Name	Position	Organization
1	U Khup Lian	Assistant State Education Officer	Chin State Education Office
2	U Kyi Toe	Assistant Township Education Officer	Hakha Township Education Office
3	U Nawl Hrang	Primary Headmaster	BEPS, Chin Oo Shi
4	U Siang Er	Primary Headmaster	BEPS, Dillo
5	U Khin Mg Toe	Primary Headmaster	BEPS, Tat Nal
6	U Cung Nawl	Primary Headmaster	BEPS, Zethit
7	Daw Ngun Cuai	Primary Teacher	BEMS, Myohong
8	Daw Khinye	Primary Teacher	BEPS, Hai Than
9	Daw Sung Hlei Cuai	Primary Teacher	BEMS, Myo Haung
10	Daw Ca Zing	Primary Teacher	BEHS (1), Hakha
11	Daw Par Tang	Junior Teacher	BEHS (2), Hakha
12	Daw Ma Khin	Headmastress	BEPS, Cawbul
13	Daw Hriang Cuai	Headmistress	BEPS, Pyidawtha
14	Daw Hlawn The Pum	Headmistress	BEPS, old bazar
15	Daw Swe Pam	Headmistress	BEPS, Yekong
16	Daw Za Khin	Junior Teacher	BEHS (1), Hakha
17	Daw Mang Tin Thluau	Junior Teacher	BEHS (1), Hakha
18	Daw Tha Iang	Primary Teacher	BEPS, Pyidawtha
19	Daw Sung Hnem	Primary Teacher	BEPS, Pyidawtha
20	Pa Ci	Headmaster	BEPS, Falam
21	Lian Uk	Headmaster	BEHS (1), Hakha
22	Doh Kip Cuai	Junior Teacher	BEHS (2), Hakha
23	Biak Cung	Junior Teacher	BEPS (1), Hakha
24	U Thang Uk	Headmaster	BEMS, Myohaung
25	Daw Ngun Tial	Junior Teacher	BEHS (1), Hakha
26	U Tho Bik	Junior Teacher	BEHS (1), Hakha
27	Daw Mang Hnem	Junior Teacher	BEHS (1), Hakha
28	Daw Tin Thluai	Junior Teacher	BEHS (1), Hakha
29	Daw Ni Vang	Junior Teacher	BEHS (1), Hakha
30	Daw Za Thluai	Junior Teacher	BEHS (1), Hakha
31	U Myint Thein	Headmaster	BEHS (1), Falam
32	U Tin Phu	Headmaster	BEMS, Lumte
33	U Hla Maung	Headmaster	BEMS, Bual Khua
34	U Kap Vel	Assistant Township Education Officer	Falam
35	Tuang Za Khen	Headmaster	BEMS, Lunghawk
36	U Kawl Lian Thang	Headmaster	BEMS, Ramthlo
37	U Gia Thawn Bau	Headmaster	BEMS, Khuadac
38	U Dar Thawng	Assistant Township Education Officer	Falam
39	Daw Khaing Thuda New	Primary Assistant Teacher	BEHS (1), Falam
40	Daw Hrin Leng	Headmaster	BEPS (1), Falam
41	Daw Sui	Headmistress	BEMS, Va Lung
42	U Tawk Kam	Headmaster	BEPS (5), Falam
43	Daw Tuang Sui	Headmaster	BEPS (2), Falam
44	Daw Sui Tin Har	Primary Teacher	BEPS (4), Falam
45	U Sui Al	Assistant Township Education Officer	Falam
46	Daw Thian Khin	Primary Teacher	BEMS, Falam
47	Daw Cawi Uk	Priamry Teacher	BEHS (2), Falam
MBESS Members			
1	Daw Htay Htay Han	Senior Teacher	DEPT
2	Daw Ni Ni San	Researcher	MERB
JICA Study Team			
1	Yoshitaka Tanakka	MBESS Social Study	JICA Study Team

Yangon CCA Workshop Participants (6th/7th Feb. 2004)

No.	Name	Position	Organization
SPECIAL GUESTS			
1	U Tun Hla	Deputy Director General	DEPT
2	U Win Kyi	Deputy Director General	DBE(3)
3	U Yan Naing	Principal	YEC(Yankin)
4	Daw Tin May Win	Principal	TEC(Thingangun)
PARTICIPANTS			
1	Daw Khin Hta Myint	Head of Department (Training)	Yankin Education College
2	Daw Cho Cho	Head of Department (Training)	Thingangun Education College
3	Daw Khin Ohn Win	Head of Department (Training)	Hlegu Education College
4	Daw Than Than Htay	Head of Department (Training)	Myitkyina Education College
5	Daw Khin Win Kyi	Head of Department (Training)	Hpa-an Education College
6	Daw Thein Myint	Head of Department (Training)	Monywa Education College
7	Daw Khin Waing	Head of Department (Training)	Sagaing Education College
8	Daw Htwe Htwe Tin	Head of Department (Training)	Dawei Education College
9	Daw Nyunt Yi	Head of Department (Training)	Taungoo Education College
10	Daw San San Myint	Head of Department (Training)	Pyay Education College
11	Daw Myint Myint Than	Head of Department (Training)	Magway Education College
12	U Soe Tint	Head of Department (Training)	Pakokku Education College
13	Daw Tin Tin Ohn	Head of Department (Training)	Meiktila Education College
14	Daw Aye Aye Myint	Head of Department (Training)	Mandalay Education College
15	Daw Myint Win	Head of Department (Training)	Mawlamyine Education College
16	Daw Sao Than Kyi	Head of Department (Training)	Taunggyi Education College
17	U Tin Saw	Head of Department (Training)	Kyaukphyu Education College
18	Daw Kyin Nyein	Head of Department (Training)	Pathein Education College
19	Daw Ohn Myint	Head of Department (Training)	Bogalay Education College
20	Daw Nu Nu Tin	Head of Department (Training)	Myaung Mya Education College
21	U Than Hlaing	TEO	Model Township of SCCA Dala
22	U Ba Thein	ATEO	Model Township of SCCA Dala
23	Daw Khin Aye Kyu	TEO	Model Township of SCCA Gyobingauk
24	U Thein Zin	ATEO	Model Township of SCCA Gyobingauk
25	U Kyi	TEO	Model Township of SCCA Chanmyatharzi
26	U Paw Kyan	ATEO	Model Township of SCCA Chanmyatharzi
27	Daw Tin Tin Mya	TEO OR ATEO	Kamaryut Township
28	U Soe Win	TEO OR ATEO	Kyauk-ta-da Township
29	U Aung Than Myint	TEO OR ATEO	Seikgyi-Kha-naung-to Township
30	U Nyo Win	TEO OR ATEO	South Okkalapa Township
31	U Myint Soe	TEO OR ATEO	Dagon Township
32	U Kyaw Tha	TEO OR ATEO	Dagon-Myo-Thit (North) Township
33	U Myo Myint Kyaw	TEO OR ATEO	Dagon-Myo-Thit (South)Township
34	U Mya Thein	TEO	Dagon-Myo-Thit (East)Township
35	U Myint Oo	ATEO	Dagon-Myo-Thit (East)Township
36	U Tun Myint	ATEO	Dagon-SeikkanTownship
37	U Aung Kyaw Nyunt	ATEO	Dawbon Township
38	U Po Kun	TEO OR ATEO	Pazuntaung Township
39	U Aye Win	TEO OR ATEO	Pabedan Township
40	U Soe Lwin	TEO OR ATEO	Bahan Township
41	U Han Swe	ATEO	Mayangon Township
42	Daw Mya Mya Than	ATEO	Mingalardon Township
43	Daw Amaradewi	TEO OR ATEO	North Okkalapa Township
44	U Kyaw Tint	ATEO	Shwe-pyi-thar Township
45	U Khin Maung Sein	TEO OR ATEO	Latha Township
46	U Pe Maung	TEO OR ATEO	Hlaing - thar- yar- Township
47	U Than Kyaw Htay	TEO OR ATEO	Tharketa Township
48	U Khin Aung Myint	TEO OR ATEO	Thingangyun Township
49	Daw Naw Thew Say	TEO OR ATEO	Insein Township
50	Daw Khin Myo Htwe	Head	Basic Education Primary School in Dala
51	Daw Myint Khin	Primary Teacher	Basic Education Primary School in Dala
52	U Zaw Min	Head	Basic Education Primary School in Gyobingauk
53	Daw Thein Thein Htay	Primary Teacher	Basic Education Primary School in Gyobingauk
54	U Myint	Head	Basic Education Primary School in Chanmyatharzi
55	U Thet Khaing Soe	Primary Teacher	Basic Education Primary School in Chanmyatharzi
56	Daw Mya Mya Win	Head	Basic Education Primary School in Kamaryut
57	Daw Yin Mya Swe	Primary Teacher	Basic Education Primary School in Kamaryut
58	Daw Nyunt Nyunt	Head	Basic Education Primary School in Kyauk-ta-da
59	Daw Yin Htay	Primary Teacher	Basic Education Primary School in Kyauk-ta-da
60	U Hla Myint	Head	Basic Education Primary School in Seikgyi-Kha-naung-to
61	U Aung Hlaing Win	Primary Teacher	Basic Education Primary School in Seikgyi-Kha-naung-to
62	Daw Myint Myint Than	Head	Basic Education Primary School in South Okkalapa
63	Daw Thin Thin Aye	Primary Teacher	Basic Education Primary School in South Okkalapa
64	U Myint Aye	Head	Basic Education Primary School in Dagon

(Continued)

No.	Name	Position	Organization
65	Daw Ni	Primary Teacher	Basic Education Primary School in Dagon
66	U Ohn Kyaw	Head	Basic Education Primary School in Dagon Myo Thit(North)
67	U Ohn Kyaw	Primary Teacher	Basic Education Primary School in Dagon Myo Thit(North)
68	Daw Nilar Thein	Head	Basic Education Primary School in Dagon Myo Thit(South)
69	Daw Khin Swe Oo	Primary Teacher	Basic Education Primary School in Dagon Myo Thit(South)
70	U Ohn Thein	Head	Basic Education Primary School in Dagon Myo Thit(East)
71	Daw Khin Zar Hlaing	Primary Teacher	Basic Education Primary School in Dagon Myo Thit(East)
72	U Chit Nyunt	Head	Basic Education Primary School in Dagon Seikkan
73	Daw Khaing San Htway	Primary Teacher	Basic Education Primary School in Dagon Seikkan
74	U Ohn Than	Head	Basic Education Primary School in Dawbon
75	Daw Htay Htay Hla	Primary Teacher	Basic Education Primary School in Dawbon
76	Daw Tin Tin Win	Head	Basic Education Primary School in Pazuntaung
77	Daw Cho Htwe Kyi	Primary Teacher	Basic Education Primary School in Pazuntaung
78	U Soe Tint	Head	Basic Education Primary School in Pabedan
79	Daw Khin Htwe	Primary Teacher	Basic Education Primary School in Pabedan
80	U Aung Naing Win	Head	Basic Education Primary School in Bahan
81	Daw Kyi Kyi Win	Primary Teacher	Basic Education Primary School in Bahan
82	Daw Thit Thit Lwin	Head	Basic Education Primary School in Mayangone
83	U Saw John	Head	Basic Education Primary School in Mingalardon
84	Daw Cho Cho Thant	Primary Teacher	Basic Education Primary School in Mingalardon
85	Daw Aye Aye Than	Head	Basic Education Primary School in North Okkalapa
86	Daw Tin Tin Yee	Primary Teacher	Basic Education Primary School in North Okkalapa
87	U Aung Myo San	Head	Basic Education Primary School in Shwe-pyi-tha
88	Daw Hla Kyi	Primary Teacher	Basic Education Primary School in Shwe-pyi-tha
89	Daw Nyunt Nyunt Win	Head	Basic Education Primary School in Hlaing-thar-yar
90	Daw Nyo Nyo Khin	Primary Teacher	Basic Education Primary School in Hlaing-thar-yar
91	U Tun Myint	Head	Basic Education Primary School in Tharketa
92	Daw Tin Tin Hla	Primary Teacher	Basic Education Primary School in Tharketa
93	Daw Phyu Phyu Win	Head	Basic Education Primary School in Thingangyun
94	Daw Myint Myint Swe	Primary Teacher	Basic Education Primary School in Thingangyun
95	U Maung Maung Myint	Head	Basic Education Primary School in Insein
96	Daw Kyi Kyi Myint	Primary Teacher	Basic Education Primary School in Insein
97	Daw Yin Yin Nwe	Headmistress	Yankin Education College Practicing School in Yankin
98	Daw Khin Saw Hlaing	Primary Teacher	Yankin Education College Practicing School in Yankin
99	Daw Win Kyi	Headmistress	Basic Education Middle School No.1 in Lan-ma-daw
100	Daw Mi Mi Khaing	Primary Teacher	Basic Education Middle School No.1 in Lan-ma-daw
101	Daw Tin Tin Sein	Headmistress	Basic Education Middle School No.4 in South Okkalapa
102	Daw Khin Aye Mu	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
103	Daw Yin Yin Mya	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
104	Daw Tin Tin Han	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
105	Daw Khin San Win	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
106	Daw Myint Myint Kyu	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
107	Daw Than Than Aye	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
108	Daw Than Than Htay	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
109	Daw Aye Aye Than	Primary Teacher	Basic Education Middle School No.4 in South Okkalapa
110	Daw Tin Tin Moe	Middle Teacher	Basic Education High School, Insein
111	Daw Chaw Chaw Win	Primary Teacher	Basic Education Primary School No.10, Sanchaung
112	Daw Tin Tin Aye	Head	Basic Education Primary School, Insein
MBESS Members			
1	Daw Myint Myint Than	Senior Teacher	DEPT
2	Daw Thin Thin Aung	Deputy Staff Officer	DEPT
3	Daw Aye Win Kyi	Junior Teacher	DEPT
4	Daw Tin Tin Nu	Senior Teacher	DEPT
5	Daw Lwin Lwin Oo	Senior Teacher	DEPT
6	Daw Than Than Htay	Senior Teacher	DEPT
7	Daw Thein Thein Yi	Senior Teacher	DEPT
8	Daw Win Win Aung	Junior Teacher	DEPT
9	Daw Tin Moe Wai	Junior Teacher	DEPT
10	Daw Tin Tin Yee	Assistant Lecturer	YEC
11	Daw San Khin	Assistant Lecturer	YEC
12	Daw Khin Sein Win	Assistant Lecturer	YEC
13	Daw Win Theingi Kyaw	Tutor	TEC
14	Daw Nwe Nwe Aye	Deputy Staff Officer	DBE3
15	Daw Khin Saw Hlaing	Primary Teacher	YECPS
16	Daw Mya Mya Thein	Primary Teacher	YECPS
17	Daw Khin Myat Htwe	Primary Teacher	YECPS
18	Daw Myo Sandar Aye	Primary Teacher	BEMS No.1, Lanmadaw
19	Daw Joanna	Deputy Staff Officer	DEPT
20	Daw Kyi Kyi Hla	Assistant Director	DEPT
21	Daw Ni Ni Aye	Deputy Staff Officer	DEPT
22	Daw Khin Sandar Lwin	Senior Teacher	DEPT

(Continued)

No.	Name	Position	Organization
23	Daw Khin Mya Nu	Senior Teacher	DEPT
24	Daw Khin Than Win	Junior Teacher	DEPT
25	Daw Hla Hla Htay	Junior Teacher	DEPT
26	Daw Khin Mya Sint	Assistant Lecturer	YEC
27	Daw Khin Cho Myint	Assistant Lecturer	YEC
28	Daw Wai Wai Oo	Assistant Lecturer	TEC
29	Daw Htar Htar Wai	Tutor	TEC
30	Daw Laban Bawk	Junior Teacher	YECPS
31	Daw Yee Yee Win	Primary Teacher	YECPS
32	Daw Htay Htay Han	Deputy Staff Officer	DEPT
33	Daw Khin Win Myint	Staff Officer	DEPT
34	Daw Tin Mar Wei	Deputy Staff Officer	DEPT
35	Daw Thein Thein Yee	Deputy Staff Officer	DEPT
36	Daw Khin Cho Cho	Junior Teacher	DEPT
37	Daw Thin Thin Soe	Primary Teacher	DEPT
38	Daw Nu Nu Yee	Assistant Lecturer	YEC
39	Daw Aye Aye Cho	Assistant Lecturer	YEC
40	Daw Mu Mu	Assistant Lecturer	TEC
41	Daw Kyu Kyu Aye	Assistant Lecturer	TEC
42	Daw Win Win Myint	Deputy Staff Officer	DBE1
43	Daw Ni Ni San	Assistant Research Officer	MERB
44	Daw Than Than Aye	Junior Teacher	YECPS
45	Daw Cho Cho Win	Junior Teacher	YECPS
JICA Study Team			
1	Norimichi Toyomane	MBESS Team Leader	JICA Study Team
2	Yoshitaka Tanaka	MBESS Team Leader	JICA Study Team
3	Shinji Tajima	MBESS Team Leader	JICA Study Team
4	Mutsumi Tsubouchi	MBESS Team Leader	JICA Study Team

APPENDIX 7-2: Future Local Resource Persons MBESS Expects

The following people are future resource persons MBESS found during CCA workshops held in local areas such as Dawei, Monywa, Lashio, Magway, Taunggyi, Hakha and Falam. Although these people need special training for CCA resource persons, they have enormous capability for absorbing new ideas of CCA.

The criteria of selection are:

- A person who devote himself to education,
- A person who is highly active,
- A person who has flexibility to absorb new ideas, and
- A person who is highly interested in CCA.

Dawei:

Daw Naw Florence Du, Kayatpyin (North) Primary School, Dawei Township
Naw Faith, Yormaza Primary School, Dawei Township
Daw Ni Ni Lwin, Dawei Education College
Daw Ni Ni Than, Assistant Lecturer, Dawei Education College
Daw Khin Kyu Kyu, Tutor, Dawei Education College

Monywa:

Daw Yi Yi Mar, Assistant Lecturer, Sagaing Education College
Daw Nyein Nyein, Assistant Lecturer, Monywa Education College
Daw Win May, Primary Teacher, Kyaway Gyi Primary School, Monywa
U Kyaw Soe Lin, ATEO, Sar Lin Gyi Township Education Office
Daw Khin Aye Thu, Tutor, Monywa Education College
U Than Tun, Tutor, Monywa Education College
Daw Nwe Nwe Swe, Junior Teacher, Monywa Education College Practicing School
U Hla Gyi, Tutor, Mandalay Education College

Lashio:

U Lome Ze, Primary Head, BEPS, Man Ai, Lashio
Soe Nyunt Aung, Primary Head, BEPS, Loi Koint, Lashio
Daw Aye Aye Mint, Primary Head, BEPS No. 23, Sommond, Lashio
Nar Nyein Nyein Htwe, JAT, BEPS, Kyaung Nyaung, Lashio
D. Naw Lawn Khan, Primary Head, BEPS No. 19, Lashio
Khin May Hnin, JAT, BEPS No.11, Lashio
Daw San San Aye, Deputy Staff Officer, DBE 2
D Lin Lin Htat, Primary Head, Post Primary School, Than Lwin, Lashio

Magway:

Daw Thin Thin May, Deputy Staff Officer, DBE2
Daw Nu Nu Aye, Assistant Lecturer, Magway Education College

Daw Myin Myint Swe, Assistant Lecturer, Magway Education College
Daw Khine Khiine Aye, Primary Assistant Teacher, Magway Township
U Win Naing, Junior Assistant Teacher, Taungdwingyi Township
U Aung Kyi Tun, Assistant Township Education Officer, Chauk Township
U Win Tint, Primary Head, Natmauk Township
U Myo Nyunt, Assistant Township Education Officer, Natmauk Township
U Thein Su, Assistant Township Education Officer, Yenanchuang Township
U Ye Myint Aung, Assistant Township Education Officer, Myaing Township
U Nyi, Primary Head, Myaing Township

Taunggyi:

U Tin Kyaw Win, Primary Head, Taunggyi Township
Daw Lwan Kyin, Primary Head, Taunggyi Township
U Hla Thein, Township Education Officer, Taunggyi Township
U Shwe Mann, Assistant Township Education Officer, Taunggyi Township
Daw Lwin Lwin Cho, Assistant Lecturer, Taunggyi Education College
U Maung Sein, Assistant Lecturer, Taunggyi Education College
Daw Yin Nu, Assistant Lecturer, Taunggyi Education College
Daw Soe Soe, Tutor, Taunggyi Education College
Daw Hnin Thida Soe, Tutor, Taunggyi Education College
Daw Khin Kaythi Soe, Tutor, Taunggyi Education College
U Sein Aung, Primary Assistant Teacher, Taunggyi Township
Daw Ni Ni Win, Assistant Tutor, Taunggyi Education College
Daw Cho Cho Thein, Assistant State Education Officer, Shan State Office
U Soe Than, Township Education Officer, Hopone Township
U Nyunt Win, Junior Assistant Teacher, Hopone Township
Daw Nang Thin Thin Oo, Junior Assistant Teacher, Hopone Township
U Thein Kywai, Assistant Township Education Officer, Hopone Township
U Maung Win, Primary Head, Hopone Township
Daw Khin Mar Aye, Primary/Junior Assistant Teacher, Nyaung Shwe Township
Daw Tin May Win, Township Education Officer, Kalaw Township
U Win Hlaing, Primary Head, Kalaw Township
Daw Tin Tin Sein, Primary Head, Yat Sauk Township
Daw Myint Myint Sein, Primary Head, Yat Sauk Township

Hakha and Falam:

U Kyi Toe, ATEO, Hakha
Daw Ca Zing, Primary Teacher, BEHS (1) Hakha
Daw Hrin Leng, Primary Head, BEPS (1) Falam
U Kawl Lian Thang, Head, BEMS, Ramthlo
Daw Za Khin, Primary Head, BEHS (1) Hakha

CHAPTER 8
HUMAN RESOURCE DEVELOPMENT AND CCA PROMULGATION

8.1 Capacity Building of MBESS Counterparts

The capacity building of MBESS counterparts is one of the main objectives of the extended phase of MBESS study. MBESS counterparts mean mainly the working group members of General Studies, Basic Science and Social Studies. The working group originally consists of staff from DEPT, teacher educators from Yankin and Thingangyun Education Colleges (YEC and TEC respectively), teachers from Yankin Education College Practicing School (YECPS) and the other local primary schools. In addition, staff from DBEs 1 and 2, a researcher from Myanmar Education Research Bureau (MERB), and a tutor from Institute of Education (IOE) have cooperated with MBESS in the working group activity since December 2002.

Through daily activities, the JICA Study Team has helped the working group members understand the concept of CCA and strengthen skills and technique of CCA implementation. Specifically, the working group members with the JICA Study Team have developed new lesson plans based on the CCA concept, implemented pilot lessons in classroom, evaluated these implementation, and revise the original lesson plans. The JICA Study Team has also highly recognized the importance of disseminating CCA around the country. To achieve this, one of the best ways is holding CCA workshops and seminars aiming to introduce CCA to local teachers and to enhance their level of understanding CCA. The JICA Study Team has held CCA workshops many times in different places. To transfer techniques and effective managerial skills, the JICA Study Team has intensively worked with the working group members in the process of preparation, implementation, and evaluation of the workshops.

By the end of MBESS, the JICA Study Team expected the working group members to gain the following two capabilities: (1) Full understanding of CCA and skills in implementing CCA lessons, and (2) Skills and techniques in organizing and managing CCA workshops. To clarify their skill level of the above two, the JICA Study Team assesses the achievement of the working group members by using check sheets and writing an essay. Check sheet 1 is for assessing the level of understanding of CCA and skills in implementing CCA lessons, and Check sheet 2 is for skills and technique in organizing and managing CCA workshops.

8.2 Results of Survey

Understanding of CCA

The survey was held two times, in July and December 2003. In the survey, there were 29 and 27 participants out of 43 working group members, respectively. Their scores in Check sheet 1 varied from 150 (lowest) to 200 (highest). MBESS expects them to get more than 160 points in the Check sheet 1. In this respect, approximately 80% of the working group members met this requirement.

According to their essays, significant improvement is found. Most of the working group members now have a clear idea of CCA which is that education must be based on children's interest and experiences. Also they realize that teachers must prepare lesson plans carefully including producing effective teaching materials, considering the most effective strategy of implementation, and preparing assessment methods. To achieve this in the current Myanmar education, they strongly recognize that teachers must change their attitude and behavior and learn more about education including the concept of CCA and child psychology. All the working group members now have a complete idea of CCA and its implementation technique. However, there are still many aspects to be considered to implement CCA effectively and efficiently. These aspects came from the recent research in the fields of psychology and assessment. MBESS has also dealt with these aspects, but only partially. Therefore, it will be an important task in the future.

The working group members now understand the concept of CCA clearly and have gained implementation skills of CCA. This is a significant result because all working group members started from no information about CCA and now approximately 80% of them gained sufficient knowledge of CCA. This great success highly depended upon the regular meetings with intensive discussions. Since the beginning of the project, MBESS organized the subject-wise working groups and has held frequent discussions among the members. During the discussion, every member expresses and shares his or her opinions freely. In addition, they have created lesson plans together and implemented them in the real classrooms. This grass-root effort resulted in successful capacity building of the counterparts. The reasons for successful counterpart capacity building are as follows:

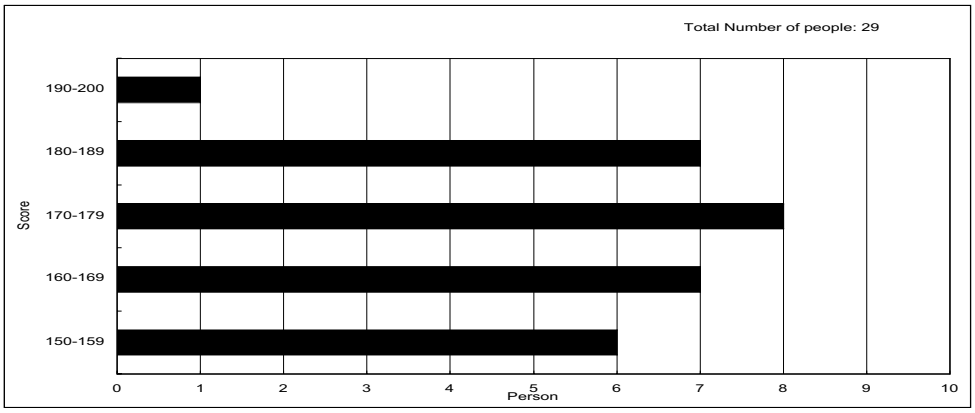
- Regular intensive meeting about CCA
  MBESS created three working groups by subject; General Studies working group, Basic Science working group, and Social Studies working group. Each group consists of 13 to 17 members, including staff from the Ministry of Education, teacher educators from the Education Colleges and teachers from primary schools. They had a regular meeting at least three times per week during the term of the project. During the meeting, the members discussed freely about the issues related to CCA and created lesson plans based on their discussion. In addition, they implemented the newly created lesson plans in real schools in order to check whether these plans work well. This meeting played an important role for the counterparts to gain clear ideas of CCA.

- Counterpart's initiative
  In MBESS activities, counterparts were the main actors and JICA Study Team supported them. All issues were discussed between the counterparts and the JICA Study Team and the counterparts always made the final decisions. This working condition brought the counterparts high responsibility and motivation.

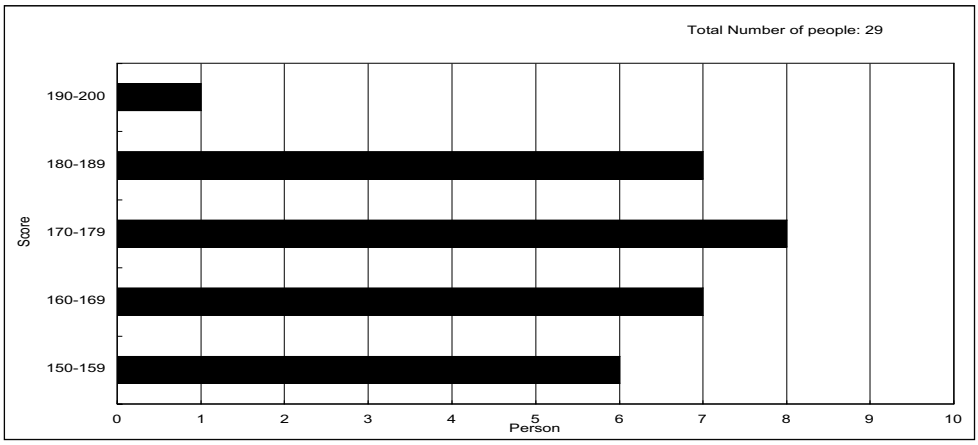
- Tight relation between counterparts and JICA Study Team
  JICA Study Team worked hard to make a good relationship with the counterparts.

JICA Study Team honestly asked and talked about various issues with the counterparts to maintain good communication with them. As a result, the relation between the counterparts and the JICA Study Team has become closer and closer and now there is a strong trusting relationship.

Although most of the members achieved satisfactory levels of understanding of CCA, a few members still need to put forth more efforts to accomplish sufficiency in CCA. According to the graphs below conducted in June and December, the gap between people who understand CCA very well and people who understand it at a certain level is becoming larger. People who do not understand CCA well (people having a score less than 159) still remain in the same percentage. MBESS suggests the following reasons for these results:



(Survey result of June)



(Survey result of December)

Figure 8-1 Distribution of Scores (Understanding of CCA)

- Language barrier

  This may be the biggest reason. Some working group members do not have a good command of English and have difficulty to communicating in English. Although those members can understand general ideas, it is significantly difficult to pick up detailed information during discussion. Therefore, those members have a limitation to improve beyond an average level.

- Degree of motivation
  Most working group members have significantly strong motivation to learn the new concept of CCA. However, a few of them tend to be satisfied with just attending the discussion of MBESS. Those people tend to be passive and are always listening to others without expressing their own opinions. Those people have a difficulty to improve themselves.

Figure 8-2 shows individual's score improvement between June and December. The X axis indicates working member's score in June and the Y axis indicates the score in December. The dots in the graph show individual member's scores. A dot which is located above the diagonal line means improvement of score (or improvement of understanding of CCA). A dot which is located under the line means decline of score (or decline of understanding of CCA). According to the graph, eleven people out of 19 show improvement, but 7 people showed a decline. Those people who improved were active participants in the discussions and had great interest in CCA. They also devoted themselves to absorbing the new idea of CCA. On the other hand, two or three people who declined were often absent from the discussion because of their busy schedule. Unfortunately they could not fully improve their level of understanding of CCA.

In the working groups, there are several members who started participating since the phase 3 extension. The number of those new participants is 7 and five out of 7 of the new participants cooperated with this survey. There is an 8 point-difference between the scores of the new participants and the score of original members. The average of score of the new participants is only 164 points while the original members score is 172 points. This means that the working group activity has contributed to the improvement of the members' understanding of CCA.

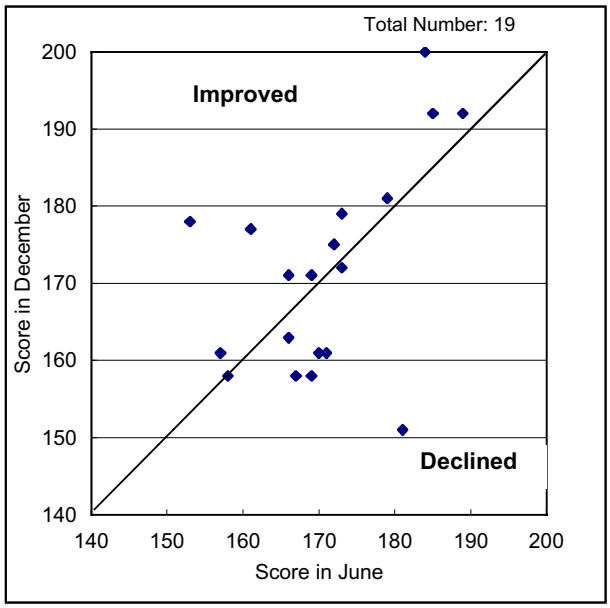
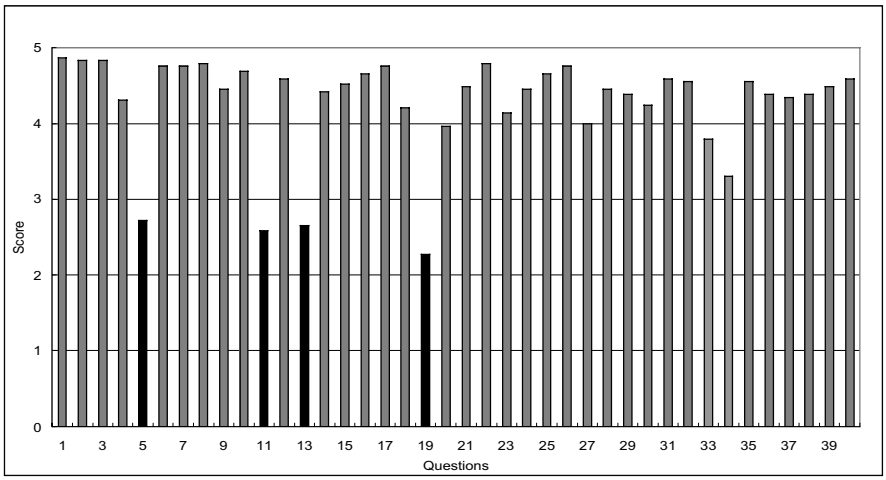


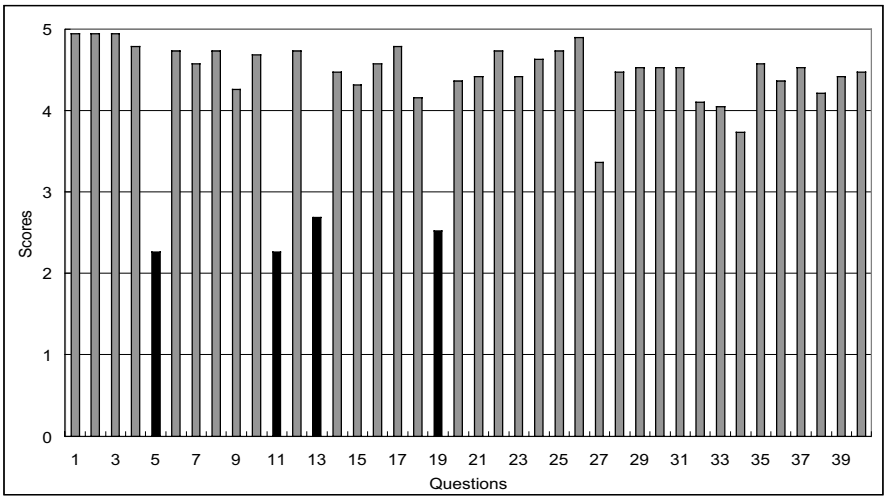
Figure 8-2 Improvement and Decline of Scores

There are similar problems among the working group members. According to **Figure 8-3**, some questions, particularly 5, 11, 13 and 19 show relatively lower scores among working group members. The average score of those questions fall between 2.3 and 2.7. This tendency continued and the scores were not improved between June and December. This means that Myanmar educators have significantly strong ideas in some areas. This should be modified in order to implement CCA effectively. The strong ideas include:

- Most teachers believe that every topic and issue should be dealt with equally,
- Most teachers believe that any teaching aids can be used if these are good aids,
- Most teachers believe that the way of assessment can be considered after classes, and
- Most teachers believe that they can start a lesson with any ways they want.



(Survey result in June)



(Survey result in December)

Figure 8-3 Score by Question (Understanding of CCA)

According to these results, MBESS recommends the following suggestions:

- Myanmar teachers need to develop the ability to prioritize and to distinguish between

the important and less important issues,

- Myanmar teachers need to develop the ability to select the most effective teaching aids among many,
- Myanmar teachers should consider assessment more carefully and establish effective assessment ways,
- Myanmar teachers should introduce lessons more carefully and develop the ability to create effective introductions.

Capability of workshop management

Effective implementation of a workshop is not an easy task. Workshop managers must clarify the purpose of the workshop and make an effective agenda based on that purpose. At the same time, they must concern carefully about the background of participants and the level of participants' knowledge. In Myanmar, traditionally workshops have long been conducted in a lecture-style wherein lecturers unilaterally explain about some topics. Discussion and activities among participants are rare. On the other hand, CCA workshops are implemented by using group discussions, group activities and presentations. Therefore, workshop managers are required to have many different skills and techniques.

Since 2001, MBESS has conducted CCA workshops many times with the cooperation of working group members. At the beginning, the experts of the JICA Study Team took all responsibility for workshops, from planning to implementation and evaluation. The working group members mainly helped the experts to implement the workshop as a master of ceremony or an interpreter between Myanmar and English. However, as the working group members gained more knowledge and skills, the JICA Study Team gave them more responsibility for managing a workshop. From the end of 2002, the JICA Study Team gave the working group members the entire responsibility for the implementation of workshops, except for the task of planning. Through this experience, the working group members have learnt skills and techniques necessary for managing CCA workshops. At the beginning of the project, all working group members were not necessarily expected to gain complete management skills for holding a workshop. However, more members than expected became highly qualified personnel. According to self-evaluation done by the working group members, 46% of the members can manage CCA workshops by themselves[1]. The other members also improved significantly. They can become highly qualified personnel for managing CCA workshops with a little more training and support. This result can be seen as a great success.

[1] MBESS evaluated capability of managing CCA workshops of the working group members by using Check sheet 2. In the Check sheet 2, the full score is 100. MBESS expects that 80 is the border line between capable or not.

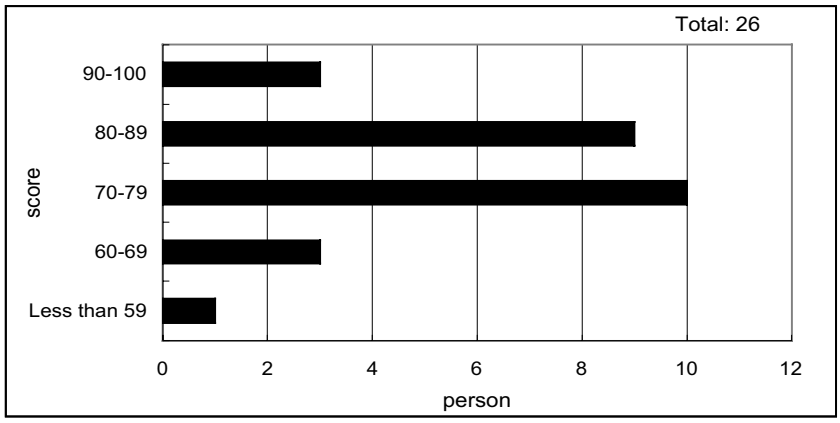


Figure 8-4 Distribution of Scores (Management of CCA Workshop)

According to an issue-wise analysis, many working group members have stronger confidence about implementation and evaluation of the workshops but less confidence about preparation (The graph below shows 4.06 point for implementation and evaluation capability and 3.85 point for preparation capability). This is because there are many things to do at the preparation stage such as making an agenda, analysis of participants, producing necessary materials etc. When the preparation is completed, more than half of the task is finished. The working group members understand this point well.

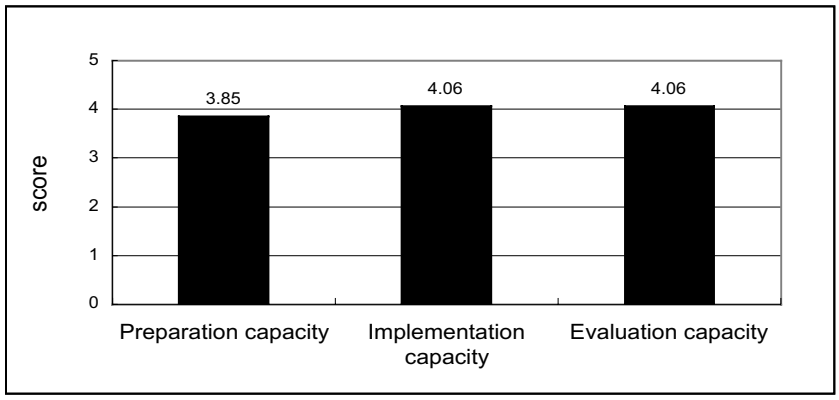


Figure 8-5 Average Scores by Issue-wise Analysis

APPEDIX 8-1: Check Sheets and Procedure of Assessment

Structure of Check sheet 1

Check sheet 1 consists of 40 questions. All questions have a multiple choice answer to choose one from "Strongly agree," "Agree," "Not sure," "Disagree," and "Strongly disagree." MBESS counterparts' level of understanding of CCA can be measured from two different points of view by using Check sheet 1: (1) Teacher's attitude and behavior by step of class, and (2) Teacher's attitude and behavior by educational item. Questions included these different points of view are as follows:

(1) Teacher's attitude and behavior by step of class
- (1-1) Before class: Questions 1 to 15
- (1-2) During class: Questions 16 to 36
- (1-3) After class: Questions 37 to 40

(2) Teacher's attitude and behavior by educational item
- (2-1) Understanding of the contents: Questions 1, 2, 3, 5 and 9
- (2-2) Skills of preparation and teaching: Questions 6-8, 13, 15, 16-25, 28-31, 33, 34 and 36
- (2-3) Understanding of usage of materials: Questions 10-12, 14 and 35
- (2-4) Teaching attitude: Questions 4, 26, 27, 32, 37-40

Each answer is given a score between "one" to "five," depending upon questions. The questions given "five" for the answer of "Strongly agree" and "one" for the answer of "Strongly disagree" are questions 1, 2, 3, 8, 10, 12, 14, 15, 16, 17, 20, 22, 23, 24, 25, 28, 29, 30, 31, 32, 35, 36, 37, 38, 39 and 40. The other questions are given "five" for the answer of "Strongly disagree" and "one" for the answer of "Strongly agree."

Structure of Check sheet 2

Check list 2 consists of 20 questions. All questions have a multiple choice answer to choose one from "Strongly agree," "Agree," "Not sure," "Disagree," and "Strongly disagree." MBESS counterparts' capability of organizing and implementing CCA workshop is measured by three points of view by using Check sheet 2: (1) Capability of workshop preparation, (2) Capability of workshop implementation, and (3) Capability of workshop evaluation. The questions including three different points are as follows:

- (1) Capability of workshop preparation: Questions 1 to 8
- (2) Capability of workshop implementation: Questions 9 to 16
- (3) Capability of workshop evaluation: Questions 17 to 20

Each answer is given a score from "one" to "five." The answer of "Strongly agree" is given "five." On the other hand, the answer of "Strongly disagree" is given "one."

Procedure of assessment

Step 1: To distribute questionnaires 1 and 2 to working group members
Questionnaires 1 and 2 are distributed to all MBESS counterparts at the beginning of academic year, 2003.

Step 2: To analyze the answers
After filling in, all questionnaires are collected and calculated the scores. Then the average score is figured out.

Step3: To conduct the same process of Steps 1 and 2 again and compare these two data
The same process of Steps 1 and 2 is conducted again at the end of academic year. The data newly gained is compared with the data gained before. The score the JICA Study Team consider enough levels is more than 160 in Check sheet 1 and more than 80 in Check sheet 2.

Check Sheet 1

Please circle the appropriate one.

Your organization is: DEPT, DBE, MERB, IOE, Education College, Primary School,

The following statements are related to how to prepare and implement lessons. Please read the statements and circle one which is the closest to your ideas from CCA point of view.

1. Teachers have to read a textbook (and a teacher's guide) carefully before class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
2. Teachers have to understand the focal points of the topic before class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
3. Teachers have to understand the relationship between today's topic and previous topics, and between today's topic and the proceeding topics.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
4. Teachers don't always have to prepare lesson plans before class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
5. When teachers make lesson plans, they have to deal with all the issues in a textbook equally.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
6. Teachers can design lesson plans without taking into account students' backgrounds, interests, and development stages.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
7. Teachers don't necessarily have to design lesson plans in the following structured manner: introduction, core, and conclusion.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
8. Teachers should design lesson plans that include students' activities such as observation, group discussion, experiment, presentation, etc.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
9. Teachers don't necessarily have to try out experiments or any other activities before class if they already know how to conduct them.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
10. Teachers have to undersatnd clearly the educational effects of each teaching aids to be used in class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
11. Teachers can use any teaching aids which make students happy and make class enjoyable.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
12. Teachers have to prepare teaching aids, such as handouts, models, and charts, carefully before class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
13. Teachers can think about how to assess students after class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
14. Teachers can use outside resources, such as parents, experts, librarians, etc. in preparing lesson plans.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
15. Teachers have to plan the physical layout of classroom before class to create a successful lesson.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
16. Teachers should start lessons with an issue incorporating students' prior knowledge.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
17. Teachers should arouse students' interests and curiosities at the beginning of class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
18. Teachers have to create an atmosphere in which students are always quiet at the beginning of class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
19. Teachers can start lessons with any way the teacher likes.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
20. Students have to listen carefully when the teacher is talking.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
21. It is not good for students to express their ideas freely one after another when the teacher asks questions.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
22. It is good if students actively discuss when the teacher gives them a discussion topic.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
23. Students have to focus their attention on their studies in order to solve assignments.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
24. Students and teacher can feel that time passes quickly when the teacher conducts a good lesson.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
25. All students have to participate actively and express their opinions during class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
26. Teachers don't have to pay attention to all students during class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
27. Teachers don't have to accept all ideas of students, and have to caution the students who have mistakes.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
28. Students have to listen carefully to the other students' opinions.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
29. Good lessons can help students realize that they lack knowledge about some topics. At the same time it can provide new knowledge.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
30. Teachers should ask students questions that surprise and pique their inerest.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
31. Teachers have to conduct student activities such as observations, experiments, group discussions and presentations, so that students feel satisfaction with their study.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
32. Teachers have to check student's level of understanding during class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
33. Teachers must not change the speed of lessons during class.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
34. Teachers always have to conduct lessons with following lesson plans strictly.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
35. Teachers have to use teaching aids effectively and in the appropriate stage.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
36. Teachers have to have the necessary supplies and materials ready for the lesson so that time is not wasted looking for them.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
37. Teachers have to reflect on how the lesson went and what might have been "unclear" or "clear."	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
38. Teachers should make notes to themselves for follow-up lesson.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
39. Teachers should teach some or all portions of a lesson again if it was "unclear."	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
40. Teachers should give remedial teaching to students who did not understand the lessons.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree

Check Sheet 2

Please circle the appropriate one.

Your organization is: DEPT, DBE, MERB, IOE, Education College, Primary School,

The following statements are related to how to prepare and conduct workshops aiming to disseminate CCA. Please read the statements and circle one which is the closest to your ideas.

1.	I can set up clear objectives before the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
2.	I can create an agenda in line with the objectives prior to workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
3.	I can prepare necessary plans effectively before a workshop, such as setting the date and place, arranging the number of participants, reserving accomodiation, etc.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
4.	I can prepare appropriate evaluation sheets prior to the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
5.	Before the workshop, I can establish a consensus with the members about the agenda.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
6.	Before the workshop, I can arrange for appropriate facilities.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
7.	I can inform people concerned (or participants) of the workshop prior to it.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
8.	I can prepare handouts and necessary materials for the workshop prior to it.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
9.	I can explain the objectives of the workshop clearly at the beginning of workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
10.	I can instruct participants on what to do clearly during the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
11.	I can consider the level of participants' undersatnding during the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
12.	I can follow the agenda based on the schedule during the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
13.	I can have a certain flexibility of implementing the workshop considering the participants' level of understanding.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
14.	I can deal with participants' opinions politely even when they have negative opinions and criticism.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
15.	I can involve all participants in the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
16.	I can motivate participants to be engaged actively in the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
17.	I can create a clear evaluation system of the workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
18.	I can analyze opinions and responses from participants after workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
19.	I can discuss with co-workers the evaluation of the workshop and listen to their opinions fairly.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree
20.	I can utilize the evaluation results for the next workshop.	**A.** Strongly Disagree	**B.** Disagree	**C.** Not Sure	**D.** Agree	**E.** Strongly Agree

Appendix 8-2: Working Group Members

(1) Full-time staff (marked "●") is required to be involved in all the process of MBESS project.
(2) Part-time staff (marked "○") is required to participate only in the working group meeting scheduled by each subject group.
(3) Part-time staff (marked "△") is the members who participated in working group from the phase 3 extension.

MBESS				Name	Position	Office
No.	GS	BS	SS			
1	●			**Daw Myint Myint Than**	Senior Teacher ／Staff of MBESS	DEPT
2	○			**Daw Thin Thin Aung**	Deputy Staff Officer	DEPT
3	○			**Daw Aye Win Kyi**	Junior Teacher	DEPT
4	△			**Daw Tin Tin Nu**	Senior Teacher	DEPT
5	△			**Daw Lwin Lwin Oo**	Senior Teacher	DEPT
6	△			**Daw Than Than Htay**	Senior Teacher	DEPT
7	△			**Daw Thein Thein Yi**	Senior Teacher	DEPT
8	○			**Daw Win Win Aung**	Junior Teacher	DEPT
9	○			**Daw Tin Moe Wai**	Junior Teacher	DEPT
10	○			**Daw Tin Tin Yee**	Assistant Lecturer	YEC
11	○			**Daw San Khin**	Assistant Lecturer	YEC
12	○			**Daw Khin Sein Win**	Assistant Lecturer	YEC
13	○			**Daw Win Theingi Kyaw**	Tutor	TEC
14	○			**Daw Nwe Nwe Aye**	Deputy Staff Officer	DBE3
15	○			**Daw Khin Saw Hlaing**	Primary Teacher	YECPS
16	○			**Daw Mya Mya Thein**	Primary Teacher	YECPS
17	○			**Daw Khin Myat Htwe**	Primary Teacher	YECPS
18	○			**Daw Myo Sandar Aye**	Primary Teacher	BEMS No.1, Lanmadaw
1		●		**Daw Joanna**	Deputy Staff Officer / Staff of MBESS	DEPT
2		○		**Daw Kyi Kyi Hla**	Assistant Director	DEPT
3		○		**Daw Ni Ni Aye**	Deputy Staff Officer	DEPT
4		○		**Daw Khin Sandar Lwin**	Senior Teacher	DEPT
5		△		**Daw Khin Mya Nu**	Senior Teacher	DEPT
6		△		**Daw Khin Than Win**	Junior Teacher	DEPT
7		△		**Daw Hla Hla Htay**	Junior Teacher	DEPT
8		△		**Daw Khin Mya Sint**	Assistant Lecturer	YEC
9		○		**Daw Khin Cho Myint**	Assistant Lecturer	YEC
10		○		**Daw Wai Wai Oo**	Assistant Lecturer	TEC
11		○		**Daw Htar Htar Wai**	Tutor	TEC
12		○		**Daw Laban Bawk**	Junior Teacher	YECPS
13		○		**Daw Yee Yee Win**	Primary Teacher	YECPS
1			●	**Daw Htay Htay Han**	Deputy Staff Officer / Staff of MBESS	DEPT
2			○	**Daw Khin Win Myint**	Staff Officer	DEPT
3			○	**Daw Tin Mar Wei**	Deputy Staff Officer	DEPT
4			○	**Daw Thein Thein Yee**	Deputy Staff Officer	DEPT
5			○	**Daw Khin Cho Cho**	Junior Teacher	DEPT
6			○	**Daw Thin Thin Soe**	Primary Teacher	DEPT
7			○	**Daw Nu Nu Yee**	Assistant Lecturer	YEC
8			○	**Daw Aye Aye Cho**	Assistant Lecturer	YEC
9			○	**Daw Mu Mu**	Assistant Lecturer	TEC
10			○	**Daw Kyu Kyu Aye**	Assistant Lecturer	TEC
11			○	**Daw Win Win Myint**	Deputy Staff Officer	DBE1
12			○	**Daw Ni Ni San**	Assistant Research Officer	MERB
13			○	**Daw Than Than Aye**	Junior Teacher	YECPS
14			○	**Daw Cho Cho Win**	Junior Teacher	YECPS

GS: General Studies
● full time
BS: Basic Science
○ part time
SS: Social Studies

APPENDIX 8-3: Monthly Schedule for Activities

December, 2002

No.	Date		General Studies	Basic Science	Social Studies
1	9.Dec	M	Meeting for orientation of the extended MBESS		
2	10.Dec	T	Meeting for sharing information with YECPS staff		
3	11.Dec	W			14:00~17:00 YEC
4	12.Dec	T			
5	13.Dec	F			14:00~17:00 YEC
6	14.Dec	S			
7	15.Dec	S			
8	16.Dec	M			14:00~17:00 YEC
9	17.Dec	T			
10	18.Dec	W	14:00~17:00 YEC		14:00~17:00 YEC
11	19.Dec	T			
12	20.Dec	F			14:00~17:00 YEC
13	21.Dec	S			
14	22.Dec	S			
15	23.Dec	M	14:00~17:00 YEC		14:00~17:00 YEC
16	24.Dec	T			
17	25.Dec	W	14:00~17:00 YEC		
18	26.Dec	T			
19	27.Dec	F	14:00~17:00 YEC		14:00~17:00 YEC
20	28.Dec	S			
21	29.Dec	S			
22	30.Dec	M	14:00~17:00 YEC		
23	31.Dec	T			

YEC: Yankin Education College, YECPS: YEC Practcing School, PL: Pilot Lessons

January, 2003

No.	Date		General Studies	Basic Science	Social Studies
24	1.Jan	W			
25	2.Jan	T			
26	3.Jan	F			
27	4.Jan	S			
28	5.Jan	S			
29	6.Jan	M	14:00~17:00 YEC		14:00~17:00 YEC
30	7.Jan	T			
31	8.Jan	W	14:00~17:00 YEC		14:00~17:00 YEC
32	9.Jan	T		14:00~17:00 YECPS	
33	10.Jan	F	14:00~17:00 YEC	14:00~17:00 YECPS	14:00~17:00 YEC
34	11.Jan	S			
35	12.Jan	S	**Yangon-Dawei**		
36	13.Jan	M	**Observation of local schools**	14:00~17:00 YECPS	14:00~17:00 YEC
37	14.Jan	T	**CCA Workshop**	14:00~17:00 YECPS	
38	15.Jan	W	**CCA Workshop**		14:00~17:00 YEC
39	16.Jan	T	**Dawei-Yangon**	14:00~17:00 YECPS	
40	17.Jan	F	14:00-17:00 YEC	PL	14:00~17:00 YEC
41	18.Jan	S			
42	19.Jan	S			
43	20.Jan	M	14:00~17:00 YEC	14:00~17:00 YECPS	14:00~17:00 YEC
44	21.Jan	T		PL	
45	22.Jan	W	14:00~17:00 YEC	PL	14:00~17:00 YEC
46	23.Jan	T		14:00~17:00 YECPS	
47	24.Jan	F	14:00~17:00 YEC	Field trip (Hmaw Bi)	14:00~17:00 YEC
48	25.Jan	S			
49	26.Jan	S			
50	27.Jan	M	PL	14:00~17:00 YECPS	14:00~17:00 YEC
51	28.Jan	T			
52	29.Jan	W	14:00~17:00 YEC	Field trip (Kyank Tan)	14:00~17:00 YEC
53	30.Jan	T		14:00~17:00 YECPS	
54	31.Jan	F	14:00~17:00 YEC	14:00~17:00 YECPS	14:00~17:00 YEC

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February, 2003

No.	Date		General Studies	Basic Science	Social Studies
55	1.Feb	S			
56	2.Feb	S			
57	3.Feb	M	14:00~17:00 YEC	Yangon-Monywa	14:00~17:00 YEC
58	4.Feb	T		**CCA Workshop**	
59	5.Feb	W	14:00~17:00 YEC	**CCA Workshop**	PL 14:00~17:00 YEC
60	6.Feb	T		Monywa-Mandalay	PL
61	7.Feb	F	14:00~17:00 YEC	Mandalay-Yangon	PL 14:00~17:00 YEC
62	8.Feb	S			
63	9.Feb	S			
64	10.Feb	M	14:00~17:00 YEC		Yangon-Mandalay
65	11.Feb	T		14:00~17:00 YEC	Mandalay-Lashio
66	12.Feb	W	14:00~17:00 YEC	14:00~17:00 YEC	Preparation of Workshop
67	13.Feb	T			**CCA Workshop**
68	14.Feb	F	14:00~17:00 YEC		**CCA Workshop**
69	15.Feb	S			Lashio-Mandalay
70	16.Feb	S			Mandalay-Yangon
71	17.Feb	M	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
72	18.Feb	T			
73	19.Feb	W	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
74	20.Feb	T			
75	21.Feb	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
76	22.Feb	S			
77	23.Feb	S			
78	24.Feb	M	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
79	25.Feb	T			
80	26.Feb	W	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
81	27.Feb	T			
82	28.Feb	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC

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March, 2003

No.	Date		General Studies	Basic Science	Social Studies
83	1.Mar	S			
84	2.Mar	S			
85	3.Mar	M	14:00~17:00 YEC	14:00~17:00 YEC	
86	4.Mar	T			
87	5.Mar	W	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
88	6.Mar	T			
89	7.Mar	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
90	8.Mar	S			
91	9.Mar	S			
92	10.Mar	M	14:00~17:00 YEC	14:00~17:00 YEC	
93	11.Mar	T			
94	12.Mar	W	14:00~17:00 YEC	14:00~17:00 YEC	
95	13.Mar	T			
96	14.Mar	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
97	15.Mar	S			
98	16.Mar	S			
99	17.Mar	M	14:00~17:00 YEC	14:00~17:00 YEC	
100	18.Mar	T			
101	19.Mar	W	14:00~17:00 YEC	14:00~17:00 YEC	
102	20.Mar	T			
103	21.Mar	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
104	22.Mar	S			
105	23.Mar	S			
106	24.Mar	M	14:00~17:00 YEC	14:00~17:00 YEC	
107	25.Mar	T			
108	26.Mar	W	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
109	27.Mar	T			
110	28.Mar	F	14:00~17:00 YEC	14:00~17:00 YEC	14:00~17:00 YEC
111	29.Mar	S			
112	30.Mar	S			
113	31.Mar	M	14:00~17:00 YEC	14:00~17:00 YEC	

YEC: Yankin Education College, YECPS: YEC Practcing School, PL: Pilot Lessons

April, 2003

No.	Date		General Studies	Basic Science	Social Studies
114	1.Apr	T			
115	2.Apr	W	14:00~17:00 YEC		14:00~17:00 YEC
116	3.Apr	T			
117	4.Apr	F	14:00~17:00 YEC		14:00~17:00 YEC
118	5.Apr	S			
119	6.Apr	S			
120	7.Apr	M	14:00~17:00 YEC		
121	8.Apr	T			
122	9.Apr	W	14:00~17:00 YEC		14:00~17:00 YEC
123	10.Apr	T			
124	11.Apr	F	14:00~17:00 YEC		14:00~17:00 YEC
125	12.Apr	S			
126	13.Apr	S			
127	14.Apr	M			
128	15.Apr	T			
129	16.Apr	W			
130	17.Apr	T			
131	18.Apr	F	14:00~17:00 YEC		14:00~17:00 YEC
132	19.Apr	S			
133	20.Apr	S			
134	21.Apr	M	14:00~17:00 YEC		
135	22.Apr	T			
136	23.Apr	W	14:00~17:00 YEC		14:00~17:00 YEC
137	24.Apr	T			
138	25.Apr	F	14:00~17:00 YEC		14:00~17:00 YEC
139	26.Apr	S			
140	27.Apr	S			
141	28.Apr	M	14:00~17:00 YEC		
142	29.Apr	T			
143	30.Apr	W	14:00~17:00 YEC		14:00~17:00 YEC

YEC: Yankin Education College, YECPS: YEC Practcing School, PL: Pilot Lessons

June, 2003

No.	Date		General Studies	Basic Science	Social Studies
1	1.Jun	S			
2	2.Jun	M			
3	3.Jun	T			
4	4.Jun	W			
5	5.Jun	T			
6	6.Jun	F			14:00~17:00 YEC
7	7.Jun	S			
8	8.Jun	S			
9	9.Jun	M			14:00~17:00 YEC
10	10.Jun	T			
11	11.Jun	W			13:00~16:00 YEC
12	12.Jun	T			
13	13.Jun	F			13:00~16:00 YEC
14	14.Jun	S			
15	15.Jun	S			
16	16.Jun	M			13:00~16:00 YEC
17	17.Jun	T			
18	18.Jun	W		14:00~17:00 YEC	13:00~16:00 YEC
19	19.Jun	T			
20	20.Jun	F		09:00~13:10 YECPS (G3/G4) 14:00~17:00 YEC	13:00~16:00 YEC
21	21.Jun	S			
22	22.Jun	S			
23	23.Jun	M		09:00~13:10 YECPS (G3/G4) 14:00~17:00 YEC	13:00~16:00 YEC
24	24.Jun	T			
25	25.Jun	W		09:00~13:10 YECPS (G3/G4) 14:00~17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
26	26.Jun	T		09:00~13:10 Field Trip	
27	27.Jun	F		09:00~13:10 YECPS (G3/G4) 14:00~17:00 YEC	13:00~16:00 YEC
28	28.Jun	S			
29	29.Jun	S			
30	30.Jun	M		09:00~13:10 YECPS (G3/G4) 14:00~17:00 YEC	13:00~16:00 YEC

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July, 2003

No.	Date		General Studies	Basic Science	Social Studies
31	1.Jul	T		9:00-10:10 YECPS (G3)	
32	2.Jul	W	14:00-17:00 YEC	9:00-11:25 YECPS (G3) 14:00-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
33	3.Jul	T			
34	4.Jul	F	14:00-17:00 YEC	9:00-11:25 YECPS (G3/G4) 14:00-17:00 YEC	13:00~16:00 YEC
35	5.Jul	S			
36	6.Jul	S			
37	7.Jul	M	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	13:00~16:00 YEC
38	8.Jul	T	10:15-11:15 YECPS (G2)		
39	9.Jul	W	12:00-13:00 YECPS (KG) 14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
40	10.Jul	T			
41	11.Jul	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	13:00~16:00 YEC
42	12.Jul	S			
43	13.Jul	S			
44	14.Jul	M	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	13:00~16:00 YEC
45	15.Jul	T	10:15-11:15 YECPS (G1)	10:15-11:15 YECPS (G4)	
46	16.Jul	W	10:15-11:15 YECPS (KG) 10:15-11:15 YECPS (G2) 14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
47	17.Jul	T	10:15-11:15 YECPS (KG) 10:15-11:15 YECPS (KG)		
48	18.Jul	F	10:15-11:15 YECPS (KG) 14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	13:00~16:00 YEC
49	19.Jul	S			
50	20.Jul	S			
51	21.Jul	M	9:30-10:00 YECPS (G2) 10:15-11:15 YECPS (G1) 14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	13:00~16:00 YEC
52	22.Jul	T	9:30-10:00 YECPS (G2) 14:00-17:00 YEC		
53	23.Jul	W	9:30-10:00 YECPS (G2) 10:00-10:50 YECPS (G1) 14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
54	24.Jul	T	10:00-10:30 YECPS (G1) 14:00-17:00 YEC	10:15-11:15 YECPS (G3)	
55	25.Jul	F	9:30-10:00 YECPS (G2) 10:10-10:40YECPS (G1) 14:00-17:00 YEC	14:30-17:00 YEC	13:00~16:00 YEC
56	26.Jul	S			
57	27.Jul	S			
58	28.Jul	M	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	13:00~16:00 YEC
59	29.Jul	T	14:00-17:00 YEC	10:15-11:15 YECPS (G4)	
60	30.Jul	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
61	31.Jul	T	14:00-17:00 YEC		

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August, 2003

No.	Date		General Studies	Basic Science	Social Studies
62	1.Aug	F	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G4) 13:00~16:00 YEC
63	2.Aug	S			
64	3.Aug	S			
65	4.Aug	M	14:00-17:00 YEC	14:30-17:00 YEC	13:30~16:00 YEC
66	5.Aug	T	9:30-10:00 YECPS (G2) 10:10-10:40YECPS (KG) 14:00-17:00 YEC		
67	6.Aug	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
68	7.Aug	T	14:00-17:00 YEC		
69	8.Aug	F	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~16:00 YEC
70	9.Aug	S			
71	10.Aug	S			
72	11.Aug	M	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	14:00~16:00 YEC
73	12.Aug	T	14:00-17:00 YEC		
74	13.Aug	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
75	14.Aug	T	9:30-10:00 YECPS (G2) 14:00-17:00 YEC		
76	15.Aug	F	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~16:00 YEC
77	16.Aug	S			
78	17.Aug	S			
79	18.Aug	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~16:00 YEC
80	19.Aug	T	14:00-17:00 YEC	10:15-11:15 YECPS (G3)	
81	20.Aug	W	14:00-17:00 YEC	10:15-11:15 YECPS (G3) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
82	21.Aug	T	14:00-17:00 YEC		
83	22.Aug	F	14:00-17:00 YEC		10:00~10:35 YECPS(G3) 14:00~16:00 YEC
84	23.Aug	S			
85	24.Aug	S			
86	25.Aug	M	**MBESS Progress 3 workshop**		
87	26.Aug	T	**CCA workshop in Yangon**		
88	27.Aug	W	**CCA workshop in Yangon**		
89	28.Aug	T	14:00-17:00 YEC		
90	29.Aug	F	14:00-17:00 YEC		10:00~10:35 YECPS(G3) 14:00~16:00 YEC
91	30.Aug	S			
92	31.Aug	S			

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September, 2003

No.	Date		General Studies	Basic Science	Social Studies
93	1.Sep	M	14:00-17:00 YEC	14:30-17:00 YEC	14:00~16:00 YEC
94	2.Sep	T			
95	3.Sep	W	9:30-10:00 YECPS (KG) 14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
96	4.Sep	T	9:30-10:00 YECPS (G1)		
97	5.Sep	F	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~16:00 YEC
98	6.Sep	S			
99	7.Sep	S			
100	8.Sep	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~16:00 YEC
101	9.Sep	T		10:15-11:15 YECPS (G3)	
102	10.Sep	W	9:30-10:00 YECPS (G2) 14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
103	11.Sep	T	9:30-10:00 YECPS (KG)		
104	12.Sep	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~16:00 YEC
105	13.Sep	S			
106	14.Sep	S			
107	15.Sep	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~16:00 YEC
108	16.Sep	T		10:15-11:15 YECPS (G4)	
109	17.Sep	W	9:30-10:00 YECPS (G1) 14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~16:00 YEC
110	18.Sep	T	9:30-10:00 YECPS (G2)		
111	19.Sep	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~16:00 YEC
112	20.Sep	S			
113	21.Sep	S			
114	22.Sep	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~16:00 YEC
115	23.Sep	T		**Yangon-Magway**	
116	24.Sep	W	9:30-10:00 YECPS (KG) 14:00-17:00 YEC	**CCA workshop**	14:00~16:00 YEC
117	25.Sep	T	9:30-10:00 YECPS (G1)	**CCA workshop**	
118	26.Sep	F	14:00-17:00 YEC	**Magway-Yangon**	14:00~17:00 YEC
119	27.Sep	S			
120	28.Sep	S			
121	29.Sep	M	14:00-17:00 YEC	14:30-17:00 YEC	14:00~17:00 YEC
122	30.Sep	T			

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October, 2003

No.	Date		General Studies	Basic Science	Social Studies
123	1.Oct	W	10:00-10:30 YECPS (KG) 14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
124	2.Oct	T			
125	3.Oct	F	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC
126	4.Oct	S			
127	5.Oct	S		**Yangon-Taunggyi**	
128	6.Oct	M	14:00-17:00 YEC	**CCA Workshop**	14:00~17:00 YEC
129	7.Oct	T		**CCA Workshop**	
130	8.Oct	W	14:00-17:00 YEC	**Yangon-Taunggyi**	**Yangon-Kyaukse**
131	9.Oct	T			**Kyaukse-Hakkha**
132	10.Oct	F	14:00-17:00 YEC	14:30-17:00 YEC	**Workshop Preparation**
133	11.Oct	S			**CCA Workshop**
134	12.Oct	S			**Hakkha-Falam**
135	13.Oct	M	14:00-17:00 YEC	14:30-17:00 YEC	**Falam-Kalamyo**
136	14.Oct	T			**Kalamyo-Yangon**
137	15.Oct	W	14:00-17:00 YEC	14:30-17:00 YEC	
138	16.Oct	T			
139	17.Oct	F	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC
140	18.Oct	S			
141	19.Oct	S			
142	20.Oct	M	14:00-17:00 YEC	14:30-17:00 YEC	14:00~17:00 YEC
143	21.Oct	T			
144	22.Oct	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
145	23.Oct	T			
146	24.Oct	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC
147	25.Oct	S			
148	26.Oct	S			
149	27.Oct	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~17:00 YEC
150	28.Oct	T			
151	29.Oct	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
152	30.Oct	T			
153	31.Oct	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC

YEC: Yankin Education College, YECPS: YEC Practcing School, PL: Pilot Lessons

November, 2003

No.	Date		General Studies	Basic Science	Social Studies
154	1.Nov	S			
155	2.Nov	S			
156	3.Nov	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~17:00 YEC
157	4.Nov	T			
158	5.Nov	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
159	6.Nov	T			
160	7.Nov	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC
161	8.Nov	S			
162	9.Nov	S			
163	10.Nov	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~17:00 YEC
164	11.Nov	T			
165	12.Nov	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
166	13.Nov	T			
167	14.Nov	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	10:00~10:35 YECPS(G3) 14:00~17:00 YEC
168	15.Nov	S			
169	16.Nov	S			
170	17.Nov	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	14:00~17:00 YEC
171	18.Nov	T			
172	19.Nov	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	
173	20.Nov	T			
174	21.Nov	F	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	
175	22.Nov	S			
176	23.Nov	S			
177	24.Nov	M	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	
178	25.Nov	T			
179	26.Nov	W	14:00-17:00 YEC	10:15-11:15 YECPS (G4) 14:30-17:00 YEC	
180	27.Nov	T			
181	28.Nov	F	14:00-17:00 YEC	14:30-17:00 YEC	
182	29.Nov	S			
183	30.Nov	S			

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December, 2003

No.	Date		General Studies	Basic Science	Social Studies
184	1.Dec	M	14:00-17:00 YEC	14:30-17:00 YEC	14:00~17:00 YEC
185	2.Dec	T		09:30-12:00 YEC	
186	3.Dec	W	14:00-17:00 YEC		10:00~10:35 YECPS(G4) 14:00~17:00 YEC
187	4.Dec	T			
188	5.Dec	F	14:00-17:00 YEC		10:00~10:35 YECPS(G3) 14:00~17:00 YEC
189	6.Dec	S			
190	7.Dec	S			
191	8.Dec	M	14:00-17:00 YEC		14:00~17:00 YEC
192	9.Dec	T			
193	10.Dec	W	14:00-17:00 YEC	14:30-17:00 YEC	10:00~10:35 YECPS(G4) 14:00~17:00 YEC
194	11.Dec	T			
195	12.Dec	F	14:00-17:00 YEC		10:00~10:35 YECPS(G3) 14:00~17:00 YEC
196	13.Dec	S			
197	14.Dec	S			
198	15.Dec	M			
199	16.Dec	T			
200	17.Dec	W			
201	18.Dec	T			
202	19.Dec	F			
203	20.Dec	S			
204	21.Dec	S			
205	22.Dec	M			
206	23.Dec	T			
207	24.Dec	W			
208	25.Dec	T			
209	26.Dec	F			
210	27.Dec	S			
211	28.Dec	S			
212	29.Dec	M			
213	30.Dec	T			
213	31.Dec	W			

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