

# A Fundamental Consideration on the Strategic Way to Improve and Strengthen the Design of Guidebook from the Students' Points of View in Japanese Education Context

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# Introduction

- Prologue
- Exemplars
- History of 'Course of Study'
- Immerging issues
- Trends of Teacher Education
- ICT and audiovisual media standard
- Recommendations

# Prologue

## 2005年～2006年度の移行教育課程表

(モンゴル国教育文化省、教育研究所)

### 1 総合学習

### 2 目的

- ◆ 子供が困難な問題を見つけ、それを協力活動に基づいて解決できる方法を身につける。
  - ◆ 一つのグループになり、協力できる力を身につける。
  - ◆ 情報を収集し、それを整理したり、評価したりする方法を身につけながら、人間化する、社会化する態度を培う。
  - ◆ 課題に対して、多様な視点から判断する。
  - ◆ 授業や授業外に習熟した知識、情報を利用し新しい知識を作る。
- この背景には---> 技術革新と社会の変化、子供の変化、……

# Exemplars

- Psychological principles for enhancing student's learning
  - ◆ Stimulating student's curiosities
- $3 + 5 = ?$ 
  - ◆ Addition and sum
  - ◆ Sensitivity and communication
- Let each student be expert with confidence
  - ◆ Things/objects/phenomena surrounding learners, preferably local and or indigenous ones
- Fostering identity in the global age
- Development and collection of Lesson Plans designed to promote the principles of Instructional Design

そして日本も……

# History of Course of Study (1/2)

- 1947 : Trial version
- 1951 : First revision
  - ◆ Education based on dairy life (Expansion of Experience-oriented Curriculum)
- 1958 : Second revision
  - ◆ Education based on Sequence (Sequential Learning)
- 1968 - 1970 : Third revision
  - ◆ Modernization of Education (Scientific- and Discipline-Oriented Curriculum)
- 1977 : Fourth revision
  - ◆ Education based on human being (more relax and enjoyable school days)



# History of Course of Study (2/2)

- 1989 : Fifth revision
  - ◆ Education focused on learner's characteristics (Schools on New view of Education achievement)
    - ★ Thinking skills, Decision making skills, and Presentation skills
- 1998 - 1999 : Sixth revision
  - ◆ Education in the information-oriented society (Promotion of 'Zest for Living' or 'Spirits to live' and New Learning like 4 pillars of Learning)
    - ★ By learner's own thoughts and experiences, he/she should (1) Find out problems, (2) consider by him-/herself, (3) make decision by him/her own contribution, and (4) solve the problems with better way of thinking and methods considered.
      - School periods for Integrated/Comprehensive Activities
        - Periods for Cross/Integrated *experience-oriented* Curriculum Learning
        - International understanding, Informatics, Environment, Welfare, and Good Health
        - 2 – 3 hours/week in primary to upper secondary schools

# Paradigm Shift in Education (1/2)

- Shift in Education Philosophy : Educational Objectives
  - ◆ Presentation, decision making skill, thinking skill, Exploring Learning, Investigation Learning/Looking-up Learning, Integrated/Comprehensive/Project Learning, Analysis, Synthesis, Evaluation with special emphasis on the utilization of information technologies

# Paradigm Shift in Education (2/2)

- Complex/Varied of Learning and Information
  - ◆ Difference of information collected and reorganized based on learner's value
  - ◆ Strengthening the ability on audio-visual literacy or media literacy/Promoting the Motivation and its continuity of interests with visual and communication technologies or information and direct experiences as well
  - ◆ Based on learner's experience and knowledge customization and re-organization of information collected and expresses is allowed as his/her original idea

# Period for the Integrated Learning

Responding to and considering the real situation of school, students and communities, each school have to carry out education activities derived by the cross-curricular and integrated learning and the learning based on students' interests.

The name of the activities will be decided by school itself.

# Period for the Integrated Learning

Environment · Welfare · Health · International Understanding ·  
Informatics (Cross-curricular and experience-oriented activities)

Identifying Problems (consideration)	field trip, survey, experience, observation, discussion, consultation (Incl. planning)
Collecting Information (find out and classify)	library, community people, community institution, the Internet, family
Synthesis (identify, ignore leave, create)	discussion, exchange information, multimedia computers
Presentation (presentation, Expression, evaluation)	papers, computers, videos, Home Pages, projectors, Classroom Newspapers

# Total Number of School hours for the Integrated Learning

	Grades	Integrated learning	Total hrs
Elementary	3rd	105	910
	4th	105	945
	5th	110	945
	6th	110	945
Lower Secondary	7th	70~100	980
	8th	70~105	980
	9th	70~130	980
Upper Sec	105~210		

# Available Subject matters et al for the Networking (Course of Study)

	(Course of Study)	(General subjects)	(Integrated Learning)	(specific Subjects)
AY2003	Current Course of Study	All Subject matters	Integrated Learning periods	Compulsory 'Informatics' US
AY2002	Effective in US			Compulsory 'Information & Computers' LS
AY2000	Effective in Pr & LS <i>(preparation period)</i>			Pr
AY1999/1998	(The Sixth revision is made public)	Mainly Sci, Math, Social Sci		Elective 'Inf. Basics' US LS Pr

# Indigenous/Local wisdom

- Visible and invisible phenomena and/or sayings, which directly or indirectly relate and contribute to the formation of identity of the people who wish to live in safe, sound and cultural life and make people comfortable. It comes from the deep understanding of, thoughtfulness and respect to both human beings and nature so as to lead them to the four pillars of learning.



# Immerging Issues (1/3)

## 1. Hot discussions:

- ◆ Ever since the new curriculum was introduced in 1998 and 1999, the scholastic level of students seems to be declining.
- ◆ Planning the general achievement test
- ◆ A measure to upgrade the reading ability
- ◆ A measure to expand school hours such as on Saturdays<sup>\*)</sup>

*(Note: Since April 2003, in public schools Saturdays have been holidays, while in private schools they have classes.)*

# Immerging Issues (2/3)

2. Responding to the results of 'PISA' survey in December 2004, which show the 'lower scores/achievements' among the Japanese students in Mathematics and Sciences,

**Present Minister of MEXT**, Mr. Nakayama gave his personal comments as follows **on 18 January 2005**;

- ◆ Seek to increase the school periods of **basic subject matters** such as language, mathematics, natural science, social science by utilizing the half day of Saturdays <sup>\*)</sup> **to strengthen the upgrade of students' scholastic level.**

(*Note: Since April 2003, in public schools Saturdays have been holidays, while in private schools they have classes.*)

# Immerging Issues (3/3)

## Discussions: What is the Scholastic level?

- ◆ Is it the one or indicator measured by the numbers who go to upper schools for example?
- ◆ How and by what do we convince and secure the future life of the students in the coming societies?
- ◆ How do we determine and evaluate the level which is closely and directly related to the aims and objectives of the current education in Japan characterized by 'Zest for living' or 'Spirits to live'?
- ★ For example, as to the 'Scientific Literacy' the PISA survey 2003, for which the 4,700 first graders are sampled from 144 Japanese high schools, shows that the Japan is at the second top rank, while the 'Problem solving skill' ranks at the fourth. As far as the 'Scientific Literacy' the ranking is the same as that in 2000. It means there are no striking drops in the the scholastic level of this item, which is one of the factors of the aims of the goal 'Zest for living' or 'Spirits to live.'
- ★ For another example, the survey 2003 shows that the Japanese students get lower grades in written/descriptive items in the language test, which proves that they are becoming weaker in thinking skill than those in the survey in 2000. This is one of the aims of the goal 'Zest for living' or 'Spirits to live.'

# Professional Development

- Past: Focusing on
    - ◆ Characteristics of teachers and methods of teaching
  - Present: Focusing on
    - ◆ Learning outcomes/Output by students
- > `Good` Teacher
- (1) Expect students` higher achievement
  - (2) From discipline/subject matter oriented to pedagogy oriented especially in secondary schools

# Professional Development

- Shift from Knowledge in the subject matters transfer to those beyond its traditional framework responding to the social and student's needs of learning
  - ◆ Rigid framework such as humanities, technical and vocational areas become flexible
  - ◆ Many people wish to learn higher level of education, which most advantaged class of people have been enjoying so far
- Need to assistance for them to learn effectively considering less drop-outs
- Create new learning environments considering multi-cultural and multi-linguistics

# Problems and Issues

- In order to upgrade the education standard, is the professional development effective or not?
  - ◆ Very few experimental results
    - ★ In what extent is the quality of teaching effective the learning outcomes of students?
    - ★ What kinds of factors in professional development affect the teachers` competencies?

# Education reform

## -Two major goals of education -

- Learner's Higher Achievement
- Flexible way of thinking both for teachers and students
  - ◆ Improvement of human relations, solving problems, and effective communication skills

➔ Four pillars of learning

➔ What ICT can contribute these two major aspects?

# Life-long learning society

- What learned in the university will become a part of technologies and competencies for their rest of life
- No repetitive jobs and less hierarchical and unstable organization

➔ Needs of flexible way of thinking

➔ What ICT can contribute these two major aspects?



# Expected role of schools

- Responsibilities in students intellectual development and social and moral-related developments
- Society become demanding schools the role and leadership in teaching moral and value education
- Schools become realized the better life of students depending on their educational functions: Students who have anxieties get less achievements in schools especially in lower secondary schools
- Development and improvement of human relationship in terms of students better life, which is not yet realized even in society, become the new role of schools

# Expected role of schools

- ➔ Cooperation between schools, families and communities become much of importance to learn both from the teachers and students stand points in terms of process.
- ➔ Education become better not only by teachers but also by the cooperation within the community.

# Role of Principals

- Not only the leader of educational affairs but also managerial role of budget for example
- Training needs for vice-principals and senior teachers who are located between principals and teachers

# Role of Teachers

- Team teaching: Teachers have to learn how to cooperate in teaching and learning situation/classrooms

(Teachers have to learn not only the technology but also the new role of teachers)

# Assistance of Changing Role of Teachers

- Integration of theory and practice
  - ◆ Cooperation between education institutions and Training in the commercial sectors
- Rapid introduction of information and communication technologies (ICTs) into schools and its utilization in schools

# What should be considered to learn ICTs

- Not only let them learn the existing and present varieties of functions of software, but also
- Ability to learn continuously the changing software, and
- Give students confidence

# Discussion

- Not only let them learn the existing and present varieties of functions of software, but also
- Give them ability and motivation to learn continuously the changing software, and
- Give students confidence.

Keeping minds with

- What are changing, what are not changing, and what should not be changed

# Teacher Education in Japan

## - Teacher Standards/Teaching Certificate -

- Teaching Certificate

- ◆ Three major categories

- ★ Regular, Special\* and Temporary\*\*

- \* for working people and not teaching professionals

- \*\* not qualified for a regular certificate

- ◆ Regular certificate

- ★ Advanced, First and Second



# Teacher Education in Japan

## - Types of Certificate -

- Elementary school teacher
  - ◆ Advanced class regular class certificate requires Masters degree (8/91)
  - ◆ 1<sup>st</sup> class regular certificate....Bachelors degree (8/67)
  - ◆ 2<sup>nd</sup> class regular certificate....Associate degree (8/45)
- Lower secondary school teacher (8/91) (8/67) (8/43)
- Upper secondary teacher (8/91) (8/67)
- Special school teacher
- Kindergarten teacher (8/83) (8/59) (8/39)

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# National Policies for Teacher Education <sup>(1/3)</sup>

## - Kawamura Plan <sup>(1/2)</sup> -

### ‘Reforming Compulsory Education’

(Aug. 2004)

- A statement of former Minister –

- (1) Towards a flexible compulsory education
- (2) Reforming in teacher training
- (3) Management of schools and boards of education
- (4) Responsibility of the Government in ensuring compulsory education

# National Policies for Teacher Education <sup>(2/3)</sup>

## - Kawamura Plan <sup>(2/2)</sup> -

### 'Reforming in Teacher Training'

#### **(1) The establishment of professional teacher training graduate schools**

- (1) With more teaching staffs who have professional career in education
- (2) In Master Course with different degrees from present MA such as those in 'Law schools' for lawyers.

#### **(2) The introduction of a teacher certificate renewal system**

- (1) To set up an effective fixed-term period for teachers' certificate
- (2) To create a new system which can evaluate individual's suitability as a school teacher

# National Policies for Teacher Education <sup>(3/3)</sup>

## - The Background of the Kawamura Plan -

### **(1) Present graduate schools for teacher education**

- (1) With MA degree and premier license
- (2) Unclear mission: to be excellent educators, or to be 'Academicians'?
- (3) Not so efficient to develop teachers' practical skills

### **(2) Social demands for teachers' quality**

- (1) Problem with 'Unsuitable teachers'

### **(3) For competitive environment for teacher education**

- (1) So as to make teacher education system more active
- (2) Restructure of 'Open system': All institutes should no longer be treated as equal

# ICT in Pre-service Teacher Training

- Requirement (4 credits)
  - ◆ Information Processing (2)
  - ◆ Computers in the subject matter (2)
    - ★ For Department of Educational Studies: Education and media
- Electives
  - ◆ Lecture and Demonstration of Educational Technology (2)  
<Requirement to the Department of Educational Studies>
  - ◆ Practice in Educational Technology (2)

# ICT in In-service Teacher Training

- Guidelines issued by Bureau of Primary and Secondary Education, MEXT
  - ◆ Curriculum responding to the Course of Study
- Guidelines issued by Bureau of Life-long learning, MEXT
  - ◆ ICT as one of the audio-visual media



# ICT competencies for Teachers in Japanese Education

- For Elementary school and Secondary school teachers developed by Special Task Force under the Bureau of Primary and Secondary Education, MEXT in March 2003
  - ◆ 10 objectives
  - ◆ General and specific according to the subject matters
  - ◆ Educational objectives described and followed by the use with functions

# Objectives for the ICT competencies for Teachers <sup>(1/2)</sup>

In order for all teachers to realize 'Understandable Classroom Learning' with the use of computers and the Internet etc., teachers are expected to be

- ◆ able to carryout the file operation (create, delete, copy the files stored on the devices and creation of folders),
- ◆ able to process document by word processing software (input, creation, printout and saving files),
- ◆ be able to do tabulating (with utilizing computing functions) with spreadsheet software
- ◆ be able to data processing (such as creation of database with the input of indexes to retrieve and classify data),
- ◆ be able to use the Internet to retrieve information needed,

# Objectives for the ICT competencies for Teachers (2/2)

- ◆ be able to explain the contents of the information with characters and images on the presentation software with the use of projector,
- ◆ be able to operate e-mails such as to send, receive and attach files and to compress and decompress the file attached,
- ◆ be able to create and revise the school webpage,
- ◆ be able to carry out teaching learning in the classroom with the use of educational software, and
- ◆ be able to carry out teaching learning in the classroom with displaying the contents on the Internet by projector,

# National Curriculum Standard for the Training of Education Media (Draft) - March 2004 - (1/4)

- Background
  - ◆ April 1973
    - ★ National Curriculum Standard for the Training of Audiovisual Education
      - To promote (1) audiovisual education, (2) continuous development of audiovisual materials, (3) establishment of the audiovisual education centers throughout Japan, and (4) enhancement of the teachers and related personnel competencies
      - Courses and implementation: Beginners Course by municipalities, Intermediate Course by prefectures Advanced Course by the Ministry

# National Curriculum Standard for the Training of Education Media (Draft) - March 2004 - (2/4)

- Background
  - ◆ April 1992
    - ★ National Curriculum Standard for the Training of Audiovisual Education Media
      - To cope with the progress of media like computers and its related media
      - Courses and target: Training Course I for teachers and Training II for leaders who plan the Training Course I
      - Describe overall media for planners to select and to decide the levels of the knowledge and skills in utilizing the media

# National Curriculum Standard for the Training of Education Media (Draft) - March 2004 - (3/4)

- Curriculum Structure
  - ◆ Training categories (22), sub-categories (66) and training items (261)
    - ★ Education media in general, Utilization of education media, Broadcasting media (radio and TV), School (Regional) Broadcasting, Visual media, Visual materials, Recording media and materials, Computers (Introduction), Word processors/computers, Spreadsheets/computers, Presentation/computers, Databases/computers, Multimedia/computers, Networking/computers, the Internet/computers, e-mailing/computers, Websites/computers, Educational comprehensive software, Copyrights and information morals, open and distance learning, Plan of regional media environment and media center, and Training of implementers

# National Curriculum Standard for the Training of Education Media (Draft) - March 2004 - (4/4)

- Curriculum Structure
  - ◆ Plan of training model courses (10)
    - ★ Training contents
    - ★ Targets: School teachers, School administrators, Librarians, Personnel in museums, Senior leaders in non-formal education institutions, Personnel in non-formal education institutions, and Citizens
  - ◆ Cases (41): classified by targets (30) and objectives (11)
    - ★ Course titles, Objectives, Targets, Implementers, Duration, and Others such as suggestions to organize the course in terms of media prepared and to be utilized, balance of theory and practice, etc. \*)

\*) Not mentioned about the place or venue for training such as schools

# Recommendations (1/2)

- Teachers have to be able to express their own experience by their own words.
- Teachers should have variety of higher order examples/repertories which directly relate to students present life and lead to the future learning.
- Create database for innovative and good practices which are utilizing existing and newly developed materials such as films and pictures taken by students and teachers as well



# Recommendations (2/2)

- Not only let them learn the existing and present varieties of functions of software according to the higher order objectives, but also
- Give them ability and motivation to learn continuously the changing software, and
- Give students confidence.

Keeping minds with

- What are changing, what are not changing, and what we should change and what we should not change

# Concluding Remarks (1/5)

- In order to upgrade the education standard and education quality in terms of the curriculum reform, is the professional development effective or not?
  - ◆ Very few experimental results
    - ★ In what extent do we accept the demands from outside schools like families?
    - ★ In what extent is the quality of teaching effective the learning outcomes of students?
    - ★ What kinds of factors in professional development affect the teachers' competencies?

# Concluding Remarks (2/5)

- ◆ Improvement of the pre-service teacher training curriculum in terms of ICT use in the university;
  - ★ Upper secondary school students, who learned under the latest course of study, will begin to enter the universities, so that
    - What kinds of courses should be planned?
    - What are the contents and/or materials for the courses required in the universities to promote continuously the 'Zest for Living' in the universities?

# Concluding Remarks (3/5)

- ◆ Improvement of the in-service teacher training curriculum in terms of ICT use in the schools and non-formal education institutions;
  - ★ Through systematic implementation of the existing ICT-pedagogy integration curriculum and the newly developed Standard of training curriculum for education media (draft), coping with the trends of education and technologies
  - ★ With consideration of the trends of changing environment in schools encouraging teachers to organize school-based training opportunities

# Concluding Remarks (4/5)

- ◆ Improvement of the faculty development (FD) programme in the universities through;
  - ★ Requesting upper secondary school students to join university courses
  - ★ Encouraging university teachers to implement the 'open-class' to observe and make critiques each other
  - ★ Encouraging university teachers in the use audiovisual media including ICTs
  - ★ Bringing university teachers down to schools for them to observe and respond the existing learning pedagogy-based teaching and learning
  - ★ Standardizing the class evaluation by students
  - ★ Training university teachers to strengthen the management competencies

# Concluding Remarks (5/5)

- In order to introduce and/or upgrade the open and distance learning or e-learning, the following researches should be carried out;
  - ◆ Clearly described policies to define the role and responsibilities of staff, lecturers and graduate students as e-moderators/ mentors/facilitators in the institution will be needed.
  - ◆ Development of training programme/e-learning course for e-moderators/mentors/facilitators
  - ◆ Comprehensive e-learning system with highest consideration in
    - ★ Quality Assurance
    - ★ Global Standards: System, Platform, Content
    - ★ Copyrights
    - ★ Language
    - ★ Portal Site DB (Introduction)
    - ★ Blended Learning

# Epilogue

- we teachers sometimes ask to pupils to have curiosities. But those who need to have the curiosities are teachers themselves, which includes curiosities to pupils, management of teaching learning and education environments, coping with their future trends and visions. Again it is university teachers themselves who have to change in the coming society, since students in principle tend to follow the teaching style what they observe and receive in their university life.

## Appendix:

# Japanese socio-economical status (1/5)

- Less number of children: since 1973 decreasing and in 2007 population will be decreasing
  - > merging schools and make the size of classrooms appropriate
  - > support the growth of children and the community development for family support
- Increasing number of the aged
  - > in 2010 25% of population will be over 65 years old
  - > they must be thought as experienced with the will of working, learning and enjoyment



# Japanese socio-economical status (2/5)

- Information oriented society
  - > the development of the Internet and multimedia
  - > the importance of information literacy
  - > bridging the digital divide
- Globalization
  - > human being, objects, money and information are freely flowing over the nation border
  - > in the international society, own community, citizens, culture and history must be much more focused on, and needs to understand different culture

# Japanese socio-economical status (3/5)

- Environment crisis and living together
  - > recycle oriented society and its education
  - > food and energy problem
  - > living in the nature and its resources
- Human rights
  - > progress of normalization in understanding each other, supporting each other and living economically independent
  - > respect all aspects of others
  - > education for human rights will be needed

# Japanese socio-economical status (4/5)

- Progress of economical society
  - > in 1980's achieved the top levels of economy and income to enjoy the rich in goods, and
  - > delay to the American free economy system characterized by effectiveness through competitions
  - > untransparent and unstable in economical growth
  - > individual characters and abilities will be much more recognized
  - > Venture companies will be much more highly evaluated
  - > the importance of safety-net

# Japanese socio-economical status (5/5)

- Self-independence and decentralization
  - > localization and deregulation to be the self-independent and decentralization system
  - > region and community will be needed to have their own characteristics
  - > citizens have to participate throughout their life in policy making, community activities and development and school education
  - > volunteers and NPO will have much more responsibilities in many aspects of life

# A Fundamental Consideration on the Strategic Way to Improve and Strengthen the Design of Guidebook from the Students' Points of View in Japanese Education Context

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