

Teacher Education in Japan and UNESCO-APEID Associated Centers Related to Teacher Education

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Prologue

- Three Major Issues in Higher Education -

- To ensure equal access
- Adult education in the 21st century
- Cost for varieties of education needs

(OECD-CERI, 1996, *Information Technology and the Future of Post-Secondary Education*)

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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)

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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

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Paradigm Shift in Education (1/2)

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

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Paradigm Shift in Education (2/2)

- Complex/Variety of Learning and Information
 - ◆ Difference of information collected and reorganized based on learner's value
 - ◆ Increasing of ability on Audio-visual literacy/Promoting the Motivation and its continuity of interests to visual and communication technologies/information
 - ◆ Based on learner's experience and knowledge customization and re-organization of information collected and expresses is allowed as his/her original idea

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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.

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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

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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	

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

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

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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 Saturdays¹⁾

(Note: Since April 2002, in public schools Saturdays have been holidays, while in private schools they have classes.)

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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 Saturdays¹⁾ to strengthen the upgrade of students' scholastic level.

(Note: Since April 2002, in public schools Saturdays have been holidays, while in private schools they have classes.)

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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' is concerned, the ranking is the same as that in 2000. It means there are no striking drops in 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.'

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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

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Teacher Education in Japan - Types of Certificate -

- ◆ Elementary school teacher
 - ◆ Advanced class regular class certificate requires Masters degree (8/91)
 - ◆ 1st class regular certificate....Bachelors degree (8/67)
 - ◆ 2nd 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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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

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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

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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

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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

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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

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National Policies for Teacher Education (1/3)

- Kawamura Plan (1/2) -

'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

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National Policies for Teacher Education (2/3)

- Kawamura Plan (2/2) -

'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

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National Policies for Teacher Education (3/3)

- 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

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Newly developed 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

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Objectives for the Newly developed ICT competencies for Teachers in Japanese Education (1/2)

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 wordprocessing 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,

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Objectives for the Newly developed ICT competencies for Teachers in Japanese Education (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 webpages,
- ◆ 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,

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UNESCO-APEID Associated Centers in JAPAN *

	Institution	Areas	Year established
1	Tokyo Gakugei University	Educational Technology	April 1974
2	National Institute for Educational Policy Research of Japan (NIER)	Curriculum Development, Science Education	December 1977
3	Agricultural and Forestry Research Center, Teikyo University	Agricultural and Forestry Education	July 1979
4	Obihiro University of Agriculture and Veterinary Medicine	Technical and Vocational Education	July 1979
5	The National Institute of Special Education (NISE)	Special Education	July 1982 (- March 2001)
6	Graduate School for International Development and Cooperation (IDEC), Hiroshima University	Elementary Education	April 1987
7	Tokyo Gakugei University	Environmental Education	April 1996

* as of December 2004

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Modes of Operation

- ◆ Organizing and running Workshops/Seminars
- ◆ Participating Mobile Training Teams (MTT, 1972- present)
- ◆ Dispatching and receiving experts
- ◆ Conducting Research and Development

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Major Programme areas in the Sixth Programming Cycle (1997-2001)

- ◆ Secondary education, including restructuring and curriculum reform
- ◆ Teacher education, including recruitment and retention
- ◆ Higher education, including issues of privatization
- ◆ Technical and vocational education with an emphasis on infrastructure development
- ◆ Educational technology
- ◆ International, moral and value education
- ◆ Research, including the financing of secondary and higher education

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Major Programme areas in the Seventh Programming Cycle (2002-2007)

- ◆ Secondary education
- ◆ Technical and vocational education and training
- ◆ Higher education
- ◆ Teacher education
- ◆ Peace education: Humane and citizen value education
- ◆ ICT and educational innovations
- ◆ Science, technology, health and environment education
- ◆ Cross-cutting theme
 - ◆ Human development throughout life-long learning
 - ◆ Quality improvement coping with equity
 - ◆ Promotion of potential for the individual and social development

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Tokyo Seminars/Workshops (1/2)

- The 1st Cycle (1974-1977)
 - ◆ 1976: First Training course
 - ◆ 1977: Second Training Course
- The 2nd Cycle (1978-1981, 28/59 *)
- The 3rd Cycle (1982-1986, 51/126)
- The 4th Cycle (1987-1991, 46/116)
 - ◆ Educational Applications of New Information Technology and Their Implementation

* No. of participants: (Overseas/Total)

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Tokyo Seminars/Workshops (2/2)

- The 5th Cycle (1992-1996, 44/114)
 - ◆ Towards Full Utilization of New Information Technologies and Development of In-service Teacher Training Curriculum
- The 6th Cycle (1997-2001, 46/96)
 - ◆ Educational Technology for the 21st Century: Open and Flexible Lifelong Learning for ALL
- The 7th Cycle (2002-2007, 32/65 as of September 2004)
 - ◆ Educational Technology for the 21st Century: Information-Communication Technologies for Educational Innovations

* No. of participants: (Overseas/Total)

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Mobile Training Team in APEID

- Areas concerned:
 - ◆ Educational Technology
 - ◆ Technical and Vocational Education Curriculum Development
 - ◆ Science Education
 - ◆ Special Education
- Budget / Japanese Funds-in-Trust:
 - ◆ 1998: 95,000US\$
 - ◆ 1999-2001: 86,000US\$
 - ◆ 2002: 78,000US\$
 - ◆ 2003: 72,000US\$
 - ◆ 2004: 78,000US\$
 - ◆ About 25,000US\$-30,000US\$ per area concerned and per year.

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Participation in Mobile Training Team in Educational Technology

- 2001: Thailand
 - ◆ To strengthen the plan of ICT Education policy development and distance learning in Thailand
- 2005: Indonesia
 - ◆ To strengthen the distance education in Indonesia and improve the research on educational technology

• Aside from MTT in educational technology, within the capacity of members of ACs in Japan, Tokyo Gakugei University has participated in MTT in science education in 1990, 1994 and 1997.

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Recommendations (1/3)

- To exchange information and experiences on educational technology coping with the knowledge-base society
- To consider and develop teacher education/training curriculum and its monitoring systems with the consideration of the balance of face-to-face and network facilitated activities

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Recommendations (2/3)

- To carry out joint researches on (1) the quality learning and quality courseware, (2) the balance of the cost-effectiveness of e-learning and traditional learning system, (3) the recognition of the basics of educational technology such as systems approach and instructional design with daily life or experiences/environment surrounding teachers, (4) the better combination of twinning programme, distance learning/e-learning programme, credit transfer programme, and external degree programmes in order to promote and strengthen the capability of the International Center of Teacher Training

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Recommendations ^(3/3)

- To promote exchange programme of faculty members and graduate students for strengthening joint and cooperative researches and study
- To strengthen the human network of participants in the previous seminars/workshops
- To organize and carry out several competitions such as those related to the software of the year, teacher of the year, teaching and learning material of the year etc. in order to promote the quality of teaching and learning

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Epilogue ^(1/2)

- What can be suggested and proposed -

- Subjects and topics related to the development and improvement of teachers competency in the knowledge-base society
- Subjects and topics related to the strategies of innovation of teaching and learning
- Subjects and topics related to the strategies of integrating 'Four pillars of learning' into teaching and learning and to the development of education for the sustainable development
- Subjects and topics related to the open and distance education and improvement of education quality
- Subjects and topics related to the system design and its management incorporating with education for the sustainable development

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Epilogue ^(2/2)

- What can be suggested and proposed -

- Subjects and topics related to the instructional design of e-learning
- Subjects and topics related to the effective management for the administrators in the formal and non-formal education institutions
- Subjects and topics related to the strategy of management in ICT facilitated classroom activities and schools
- Subjects and topics related to ICT integration into pedagogies
- Subjects and topics related to the improvement of the quality of project oriented learning activities and education for the sustainable development.

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