



Shogakkou & Chugakkou

About Primary and Lower Secondary Education in Japan

Bjorn Magne Aakre



Continuity: Urban high school student in uniform take part in purification at an old temple in Kyoto

Preface and Acknowledgements

This paper presents a study of Primary School Education in Japan from a Norwegian perspective. The paper is a revised and an extended version of my report “Compulsory Education in Japan”. There are several reasons why I decided to make the new report. At first, many students, as well as others, who attended my lectures and speeches about education in Japan, were very interested in the topic. I received many questions and in order to elaborate my answers, I realized that further study was necessary. Finally, I was also asked to make some changes and elaborate some aspects in more details when my second edition of the first report was to be registered as an official document by Telemark University College.

The presentation is made comparative. However, I will not say it is not fully consistent in all details. The reason is that Japan is a big country with a huge population. Therefore, it would not be possible within the limits of my available resources to carry out a comparative study that was fully statistical representative in all aspects. However, I still think the content gives a fair indication of the real situation in contemporary Japan.

I want to express my gratitude to Nagoya University, Telemark University College and Norwegian Association of Authors (NFF) who made my visit to Japan possible. I would especially like to thank Associate Professor Etsuo Yokoyama who was my host and arranged my program in Japan. I would also like to thank Professor Kunikazu Kitagawa who was my host in Osaka. Kitagawa was also my guide in Kyoto, and gave me some very interesting knowledge about socio cultural aspects of Japan society and culture. Finally I would like to thank Masako Fukuda Andersen for helping me to meet with contacts in Japan, and Philip Beck who helped me do the proofreading

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1. Introduction

Diligence and hard work are qualities the Norwegians in general seem to associate with the Japanese. Discipline and limited freedom for the individual are also characteristics that can be heard and observed about Japanese education in Norwegian media. Some Norwegians would even like the idea of importing Japanese discipline and order into the Norwegian schools.



Others have the impression that the children in Japan do not have a happy childhood because they have heard reports that the incident of suicide among young people in Japan is very high. In fact, there are some indications that the rate of suicides among young people is higher in Japan than in Norway. However, it is lower in Japan than for instance in the USA.

The Norwegians seem to have the image of the average Japanese as a friendly, but a rather shy person who smiles often, is always obedient and often bows his head and nods when saying “yes”. During my visit to Japan I experienced that a nod didn’t necessarily mean “yes”. Many Japanese just don’t seem to be aware that they are nodding.

When asked, the Japanese tend to say they are not religious. However, at least some of their characteristic behaviour seems to be deeply rooted in both Buddhist and Shinto religion as well as Confucianism. Buddhism, which was introduced in Japan in the Nara period between 600-700AC, has this to say for instance about the relationship between the teacher and student: “*The student should always stand up and bow his head when the teacher comes in, wait for him, follow his instructions, not deny doing a favour for him and listen respectfully to his teaching*” (The Teaching of Buddha, 1966). In many ways these traditions seem to be a parallel to the moral and ethics of the puritan and pietistic movement that introduced compulsory education in Norway in 1739AC (Myhre, 1988).

Order and harmony were qualities in the philosophy of Comenius who wrote *Didactica Magna* round about 1630, the first great European book about the art of teaching. In Japan this

time of history is called the Edo period, a time when Japan chose to be very much isolated from the rest of the world. Japan was a strict feudal society with a distinct two-class social system. Education within the ruling Shogun and Samurai families was both academic and practical and aimed at personal cultivation as well as government and military control. Education for common people was primarily training through apprenticeships aiming at skills for a decent everyday life. In this social system, as well as Shinto and Buddhist religion, I think the roots of Japanese education today probably can be found.

Finally, I suggest that modern education in Japan also reflects the geography and the history of the country. Japan is a group of islands and the Japanese probably migrated into Japan from mainland Asia about 10.000 years ago (Bito,1992). That is about the same time as the first Norwegians migrated from the South into Norway.

Like Norway Japan also has a minority population, the Ainu. Most of them are living in Hokkaido, the northern region of Japan. The history of the Ainu is probably similar to the history of the Lapps in Norway. However, the Ainu in Japan seems to have been even less valued in Japan than the Lapps are in Norway. However, I think that this topic deserves its own study.

The national foundation day in Japan is February 11 and called Kenkoku Kinen-no hi. It is said that 2661 years ago the first emperor Jinmu-Tenno succeeded to the throne. However, this seems to be a controversial celebration in Japan as some claim it is based on a nationalistic myth. The national day in Norway is May 17, which is celebrated as a commemoration of the democratic constitution that was approved in 1814. The present democratic constitution in Japan was approved on May 4 1946.

2. Purpose and Method

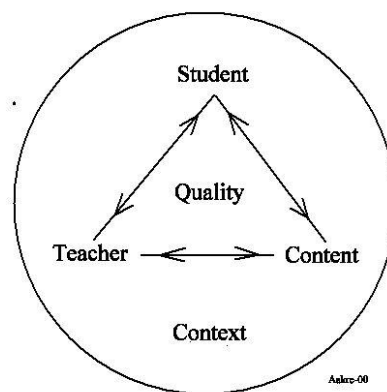
The main purpose of this paper is to present the results from a comparative study on Primary School Education in Japan and Norway. I had several motives for doing this study. Firstly there are few or any Norwegian papers available about this topic in Norway, and secondly, quite often Japan, and some other Asian countries, are referred to on several occasions when education is discussed. The arguments that are used though often seem to be rather superficial and also tend to overlook the context of the local culture. Finally I have some idealistic motives. I simply believe it would be to our advantage to know more about Japan. Not only because Japan is the second largest economy in the world, but also because of her unique culture and her long and interesting history. The purpose of comparative studies is not only to learn about education in other countries however, it is just as good a way to understand better our own society and the way we educate our own children. I also hope this paper will contribute to a better understanding between Japan and Norway.

Primary School Education in this case is the same as “*grunnskole*” in Norway, and “*shogakkou*” plus “*chugakkou*” in Japan. That means this study includes both elementary school education as well as lower secondary school education as shown in the table below:

| Japan | Norway | | English | |
|-------------------------------------|------------------------------------|--------------------------|------------------------|-----------------|
| <u><i>shogakkou</i></u> (age 6-12) | <u><i>grunnskole</i></u> | barneskole (age 6-13) | <u><i>primary</i></u> | elementary |
| <u><i>chugakkou</i></u> (age 12-14) | (age 6-15) | ungdomsskole (age 13-15) | <u><i>school</i></u> | lower secondary |
| koutgaougakkou (age 15-18) | videregaande opplæring (age 16-19) | | upper secondary school | |

For this study I have used a combination of qualitative and quantitative methods (Denzin and Lincoln, 1994). I have been influenced by a socio-cultural approach because I think it is important to study and to understand the system of education in any country in the context of the local history, the culture and the political system. A socio cultural perspective also means that interaction between different roles and actors in the schools are important and interesting aspects to be considered (Mead, 1934) and (Weber, 1922). As far as possible I have tried to make the study and the presentation comparative. However, it is not fully consistent in all details because a statistical population was beyond my ability in this case. I have also used curriculum theory (Goodlad, 1979) and put attention to main didactical categories, for instance the categories used by John Dewey in his book *Experience and Education* (1938). Finally I have put more focus on science and technology than other subjects.

I have tried to illustrate my research design in the model below. What I have been looking for and trying to analyse are given by the five main categories in the Model: First I have tried to put some emphasis on the *Context* of education in Japan. Probably the most dominant differences between education in Japan and Norway will be related to this category because Japan is a unique nation in East Asia far from Norway. Then there are the *Student*, the *Teacher* and the *Content*, or the material as well as the methods used in the schools. The fifth category, which is *Quality*, is put in the centre to indicate that quality is related to how all the main categories are taken care of by the education that is conducted. Finally there are important *Relations* of interaction between the different categories, especially the students and their teachers.



Research Model

Data and information have been collected in three ways. First, some data and information are based on Japanese literature written or translated into English. As I am not myself able to read or understand Japanese, I have not been able to fully verify this information the way I would like to. Secondly, I have partly based my conclusions on observations and experiences I made during my 5 weeks visit to Japan in May-June 2000. However, I only visited a few schools in Chubu and Kinki regions. Therefore I don't think my experiences are valid for every school in Japan. On the other hand I think they give a fair indication of reality in Japanese schools today. Finally I have also used quantitative method and data collected from the Bureau of census in Japan and Norway. These data I think are fairly valid and reliable.

3. Historical summary of education

This paper deals primarily with education in contemporary Japan. However, I think it might be necessary to give a historical summary about when primary education became compulsory in Japan and Norway, and when it was further developed into the present school systems.

| | Japan | Norway |
|---|--|---|
| Middle Age | Some schools within the Temples | Some schools within the Churches |
| Pre-modern times Ca 1600 - 1850 | “Hangaku and Terakoya”. Elective. Edo period (Ca 1600 - 1868) | “Allmueskolen”. Compulsory. (1739 AC) |
| Modern times Ca 1850 - 1970 | 6 years Primary School Compulsory. (Ca 1871-1873) 9 years Primary School Compulsory. (Ca 1952-1958) | 7 years Public School, (“Folkeskole”) Compulsory. (1889) 9 years Primary School Compulsory. (ca 1959-1969) |
| Post-modern times Ca 1970 - | Educational Reform 2002 9 years Primary School. Compulsory. | Educational Reform 1997. 10 years Primary school. Compulsory. |

In the Middle Ages there was no formal public education either in Japan or in Norway. Buddhism came to Japan via Korea about year 600 AC, and gradually schools were introduced within the Temples. Christianity came to Norway from England about year 1000 AC and gradually schools were introduced within the Churches.

In pre-modern times, between 1600 and 1850, the origin of today’s education in Japan as well as in Norway evolved. The Portuguese came to Japan in 1542 and it appears that some Western Jesuit schools were founded in Japan at that time. However, after many years of civil wars in Japan and fighting between different clans, in 1603 the Tokugawa family gained power and founded their centre of control in Edo, now Tokyo. Japan entered what is called the Edo-period that lasted for 265 years. The country was closed to foreign intruders. There was a long period of peace and the culture flourished all over Japan, based on independent Japanese culture and traditions. There was no national school system established, but many private schools were founded in most part of the country. There were of course already many schools for the elite, the *hangaku*, and there were a growing number of schools, called *terakoya*, for the commoners.

As a result of the Lutheran reformation in Europe, public education became an issue. In year 1739 the Danish-Norwegian King introduced compulsory education in Norway. The content

was for many years limited to some basic reading and writing skills. It was not until the influence from the industrial revolution that a more comprehensive curriculum became an issue.

In modern times the industrial revolution brought dramatic changes to Japan, and to some extent also to Norway. The Tokugawa regime had to resign and the Meiji restoration period started in 1868. For the purpose of building a modern nation and implementation of modern science and technology, a national school system was established. A modern comprehensive curriculum was implemented from about 1871-1873¹. Though not so dramatic as in Japan, the Norwegian primary schools system also went through similar reforms in the same period, and 7 years of comprehensive primary school was approved in 1889. By the end of this period, about 1970, both Japan and Norway had improved their primary school education dramatically to include 9 years of compulsory education throughout the whole country.

Post-modern times marks transition from the industrial society to the information society. After some years of focus on upper secondary education and higher education, Norway started to prepare new comprehensive school reforms round about 1990. About the same time Japan established the National Council for Educational Reforms (Kazuo, 1992) in order to make recommendations for new reforms. Norway implemented her new reform in 1997, and Japan is about to do the same in 2002. Both Japan and Norway seem to have similar motives for their educational reforms. In both countries, we find similar arguments, such as: “We are living in an information age, as well as in a global community and we must respond to the flow of information and the realities of today”. Information and Communication Technology (ICT) is another aspect of this new revolution, which also effects the schools and education in both countries.

4. Overall values and organisation

Order and harmony were the most significant qualities I experienced when I visited Nakautchi Elementary School in Mino, which is located in central Gifu Prefecture. The students were playing outside when I arrived. They smiled friendly, nodded their heads and some waved the hands too saying “Konichi wa” or just “O-hayo”. At the entrance I had to take off my shoes and put slippers on before I went over the shining floor, and then I met the Principal, Takeshi Ishigami. I wondered: Am I entering a temple of knowledge?



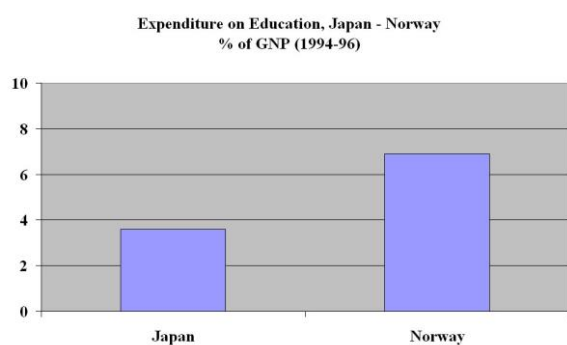
The overall aim of education in Japan and Norway does not seem to be very different when you read the fundamental laws and principles. Both countries claim by law to promote full development of personality. Japanese education aims at qualities like “striving for the rearing of the people, to be sound in mind and body, embracing truth and justice, respecting individual values, to have work ethics, have a deep sense of responsibility and be imbued with an independent spirit as builders of a peaceful state and society” (MESSC, 1999, p9).

Democracy is an important aspect of education (Dewey, 1938). Historically Japan and Norway have different traditions when it comes to democracy. Therefore, the order and discipline that can be observed in Japanese schools, and not so much in Norwegian schools, might be interpreted in at least two ways. Some would argue that Japanese schools give the students better opportunity to learn because they have more order and respect. On the other hand, others would argue that Japanese schools have less student democracy and therefore gives the students less freedom and opportunities to develop ability to take part in and to develop a democratic society.

Both in Japan and Norway the law of education provides basic aims and principles to education. However, the Japanese Fundamental Law of Education is not so comprehensive as the Norwegian Education Law, “Opplæringsloven”, that was approved in 1999. Therefore, education in Japan is regulated by separate laws, which deal with issues like organisation and management, social education, local administration and the system of local boards of education. To some extent this is true in Norway too by the law of local municipalities, “Kommuneloven”. The local municipalities in both countries manage the primary schools.

Special education can be observed in ordinary Japanese primary schools. However, handicapped students in Japan more often tend to be in special schools and institutions than in the case in Norway. Since 1975 special education in Norway is more and more integrated in the local schools and also most often in ordinary classes.

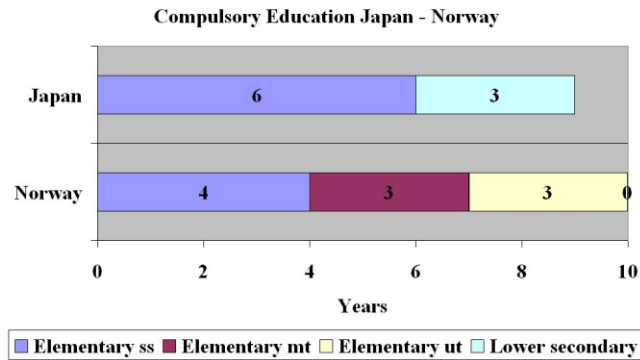
Minorities like the Ainu do not seem to have any special status neither in the Japanese Law of Education nor in the national curriculum. In the present Law of Education in Norway the Lapp people is mentioned specifically, there is a special Lapp curriculum and the Lapp language is respected as their main language. All Norwegians have to learn about the Lapp culture and to respect their identity.



Japan spends about 3,6% of the GNP on education. So far I have not found any specific figure for compulsory education. Norway spend about 6,9% on education and the average in the European Union is about 4,2%. I don't think it is possible to use these figures as quality indicators. One reason for the

differences could be that the school system in Norway is less effective than the Japanese system. Another reason might be the fact that administrating schools in Norway is more expensive due to the scattered population, big rural areas, many small schools and expensive transportation. Small schools also means fewer students in the classes, relatively more teachers and higher salary costs, which are the highest cost factor in any system of education. In Japan the parents do pay some contribution both in public and private schools. Based on official statistics I have estimated that the Japanese parents pay between 500-1500\$ per year. This figure is probably a little higher than the Norwegian parents have to pay. However, private schools in Japan are more expensive than in Norway.

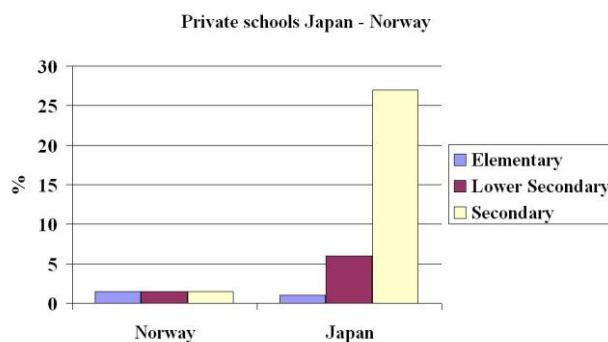
In both Japan and Norway cabinet orders are made to enforce the laws. In Japan the Ministry of Education, Science, Sports and Culture, MESSC¹, publish ministerial ordinances, notices. Both Japan and Norway have a national curriculum that regulates the courses of study. Therefore it can be said that both countries have an egalitarian school system that is not so common in other countries.



After World War II the Japanese educational system was changed according to the American model of 6-3-3-4 systems nationwide. That means 6 years of elementary school, 3 years of junior high school or lower secondary education, 3 years of secondary education and 4 years at college or university. 9 years of primary school are compulsory (Kazuo,1992).

In Norway the primary school is 10 years and compulsory, which includes elementary school divided into three levels. The 6 years of elementary education in Japan are similar to the first 7 years called “barnetrinnet” in Norway. 3 years of lower secondary education in Japan is similar to the last 3 years called “ungdomstrinnet” in Norway.

One argument sometimes used in Norway to explain the high expenditure on education is related to private schools. However, I was surprised to find very few private elementary schools in Japan. In Japan children must attend 9 years of compulsory education from age 6 to age 15. In Norway it is 10 years between age 6 and age 16.



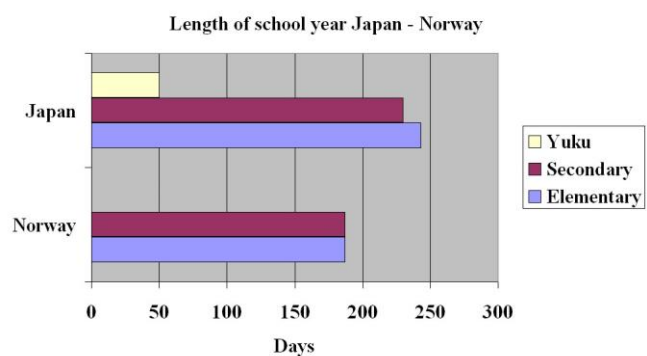
In both countries almost all elementary students enrol in national schools. Only about 1% of the elementary schools in Japan are private. This is about similar to Norway. However, about 6% of the Japanese students in lower secondary school enrol in private schools. This is higher than in Norway where still only

about 1,5% enrolls in private schools.

In Japan secondary schools and higher education has a higher proportion of private schools than in Norway. When the students leave compulsory education at the age of 15 years old, about 27% of the Japanese students continue in private secondary schools. However, the private schools are supported by the government, which pays about 50% of the expenditure. In Norway the government pays about 85% of the costs in private schools.

In Japan students have to pass an entrance examination to enter any school beyond compulsory level. In Norway they don't as they since 1994 everyone has the legal right to continue in 3 years of secondary education. Therefore there is a lot more focus on entrance examinations and tests in Japan than in Norway.

In Japan most students go to Juku after school. Juku are extra curricular activities on a private basis as well as private classes on regular school subjects. There seem to be several reasons why they do so. Some go to Juku simply because they enjoy to go there to be with the friends.



However, most of the students go to Juku because their parents want them to be better skilled in school subjects or as a kind of organized homework. Another and important reason is to prepare for entrance examination in order to enter a more prestige school in the future. This tradition is unique in Japan and makes the competition very hard.

The school year in Japan starts in April and lasts for 230 days. This is much longer than in Norway where the students attend school for only 187 days. In Japan there are also a lot more students in the classes than in Norway. In Japan the average number of students in the classes are often 40, while the limit in Norway is 30 students, and most often even lower. In one high school class I visited there were even 48 students in a normal size classroom. Japan teachers also find this high numbers difficult to cope with, especially when communication is needed. However, Japanese teachers also argue that some times many students make is advantageous. They argue that many students in the class make the students more responsible and better to cooperate, because they have to.

5. Content

Religion, moral and ethic may represent the biggest difference between education in Japan and Norway. Japan has no state religion while the Norwegian constitution still has a link to Christianity. In Norway Christianity also plays an important role in moral education, though other religions also are equally represented in the subject by the last reform of 1997.



The reasons Japan do not has religion as a specific subject in the schools is probably complex. At first, for hundreds of years Shinto and Buddhism coexisted and both play different roles in the Japanese culture as well as in the everyday life of the Japanese. Another reason might be the fact that the Peace Constitution of 1946 claimed religious freedom and did not include any specific religion. The Peace Constitution also aimed at promoting peace and harmony and the laws aimed to prohibit any religion to be used for ideological indoctrination. There used to be a fairly close links between Japanese nationalism and Shinto rituals, especially in the period between 1930 and 1945, when Japan was involved in World War II. Even in countries occupied by Japan, like Korea, the students in schools had to learn Japanese and follow Shinto rituals in this time period ². The German occupation of Norway between 1940-45 did not include similar orders.

Like modern Norwegians the Japanese seem to embrace several religions. However, Buddhism and Shinto are the most common religions, and many Japanese even seem to confess and practice both of them (Fujio, 1992). Confucian ethic also plays an important role when it comes to aspects like respect, loyalty and group mentality. Buddhism came to Japan from outside via China and Korea and was a kind of state religion in the Nara period from about 700 AC, but that was a long time ago. However, I think the Japanese motivation and tradition for education should be understood in the context of this historical period. There are also still many reminders about religion to observe in Japanese schools. For instance, today many Japanese classes every year visit historical sites related to religion, like Daibutsu, the great Buddha in Nara. On the picture you can even see the Daubatsu made by elementary students in Gifu as a preparation for their school excursion to Nara in the spring 2000. It was made as teamwork and a puzzle out of many small pieces put up in the gym hall.

Instead of religion Japanese students have moral- and social education and the schools put heavy importance on ethics and good behaviour. In both countries each school organizes its own curriculum on the basis of the national course of study, taking into consideration the actual condition of the community. In Japan the three main areas “subjects”, “moral education” and “special activities” are to be covered in the local curriculum.

5.1 Social education

Modern education must be relevant for the society outside the school declared the principal at Nakautchi Elementary School in Gifu. In this way he wanted to improve his school through social training and closer relations with the local community. As far as I could see the school had a program and a school calendar that reflected relevant activities according to his idea.



The grounds he gave for so doing were rapid change in society and family structure today.

When I visited the school in May and June I could observe quite some use of group activity, discussions and also subject elements gathered from the local area. Both in mathematics, science and social science I could see activities related to the season of the year, like planting rice in the springtime. I could also observe a lot more group activity than I had expected. One class was divided in groups. The students studied and discussed dilemmas about living in urban versus rural areas. June is also the month for school excursions and some students studied and prepared their visit to Nara.



Early afternoon every day the Japanese students have to clean their own school. Music, Wiener waltzes, were played from a central play station and the music could be heard from the loud speakers all over the school while they worked. The teachers guided and helped the students and checked whether the job was done well or not. The students smiled and laughed and seemed to enjoy doing the work and, as far as I could see, everybody participated. The students had different jobs in turn and

they worked in groups. Activities like serving lunch and cleaning the school seemed to be part of social training and integrated with the subject “life environment”. In this way they learned about environmental issues in a practical way, and about how to handle waste. In Norway we tend to learn about the problem of waste in a theoretical way. In this Japanese school they also seem to learn how to do it in practice every day. I am afraid this tradition would be very difficult to introduce in Norway, though I think it would be a good idea.

Japan has a nation wide school lunch program. The purpose of this program is both to give the students a nutritious and well-balanced meal, as well as to help them acquire a better understanding of nutrition, good eating habits and social values of a meal. The school lunch program is well organized in the schools and the local government is responsible for providing the food to the school in a proper and hygienic way. In the elementary school the lunch was prepared and organized by the students as a part of the social training at the school.

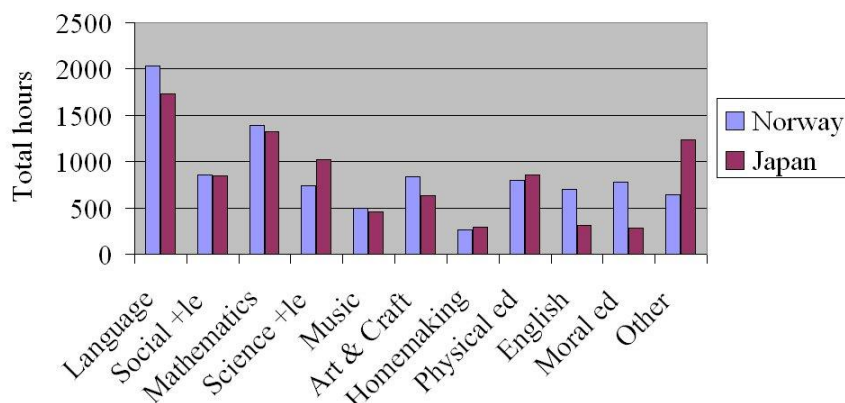


I was served school lunch twice, once at an elementary school and once at a secondary school. Both meals tasted nice and comprised rice, soup, fish, noodles, milk and also a cake. The parents have to pay the majority of food expenses. I was told the parents had to pay about 4000 Yen a month for the food. That means about 300 Norwegian kroner, which is only about 2\$ for one meal. In Norwegian schools they do not have a lunch program. However, most elementary schools distribute milk for the packed lunch the students bring from their homes. Some Norwegian schools, mostly secondary schools, also have a cantina where the student can buy a lunch meal. The average price for a regular lunch in the Norwegian cantina would be about 3-4\$.

5. 2 The subjects

Even though Norway has 10 years of compulsory education and Japan only 9 years, both countries have about the same total amount of hours. The reason for is the Japanese school year is longer. There are no large differences in the type of subjects, nor in the amount of hours spent on each subjects.

School subjects Japan - Norway
compulsory education



The Norwegian schools spend more time on native language and mathematics than the Japanese schools. The fact the Japanese schools spend less time on mathematics is probably a surprise as it is documented through international research the Japanese students do very well in both mathematics and science. However, the Japanese schools spend more time on science than the Norwegian schools. Religion or moral education is also quite different. Norwegian schools spend more time on Christianity and Religion as a means of moral education, while the Japanese schools have moral education only.



Reading and writing were the first basic skills that were introduced in schools, both in Japan and Norway. However, there is one very big difference. In Japan the students start to read and write Kanji symbols, which are an important part of the Japanese language. In addition to Kanji symbols the Japanese students also learn to use two sets of characters called *hiragana* and *katagana*. The old Kanji symbols have meanings. I think most people will easily understand the simple symbol to the left means a human being on its two feet. In Norway students learn Latin letters only. In Japan the students do not start to learn Latin letters until the end of elementary school. An interesting aspect is that there seem to be less reading and writing disabilities in Japan than in Norway. May be the Kanji symbols with their visual meanings are an advantage for learning?

Both in Japan and Norway elementary school students get homework nearly every day. However, the Japanese students seem to have more homework than the Norwegian students. Some Norwegian schools even make experiments with not giving the students homework. Such experiments are not likely to be tried out in Japan in the near future.

Social science consists of civics, history and geography in both countries. In addition Japan also has life environment issues in social science. Japanese textbooks contain little about Norway. In upper secondary schools there are three lines about the Vikings and the Kalmar Union. However, most elementary students I talked to knew that Norway is a country in Europe, that it is very cold and there is a lot of fish, especially Salmon. In Norwegian textbooks there is a reasonable amount of information about Japan. Young Norwegian students know about samurais, sports like judo and sumo, they know the Japanese eat rice and sushi, and they know the Japanese use sticks when eating. Japan is also well known by Norwegian students through products like Sony, Nintendo, Toyota, and many others.

History education in Japan seems to be controversial these days. One indication is the Society for History Textbook Reform that was founded in 1997. Another indication is the debate about the approval of a new history textbook for middle school students, written by Professor Nabukatsu Fujioka (Fujioka, 2001), which Korea and China have protested against because they claim the textbook does not tell the truth about Japanese invasions in Korea and China. Some Japanese also claim this movement is nationalistic. At this point I personally have too little knowledge of this to make any conclusion, but wish to call attention to the fact there is a controversy.

Most Norwegians know the history of Hiroshima and they learn about it in school. Peace education can also be observed in Japanese schools. Every year many classes go to Hiroshima to visit the Peace Memorial. In the centre of the park there is a statue of a young girl holding a golden crane in her hands. Every day, young and old, visit the place to lay colourful hand-made paper cranes on the ground. Origami, making things from paper, is a traditional art in Japan. The girl on the top of the statue is the young student Sadako who died from leukaemia several years after the atomic bomb was dropped over Hiroshima in August 1945. A saying says “a crane lives for thousand years”. Therefore Sadako started to make paper cranes from her hospital bed. The day she completed 644 cranes, she died. Later she was buried together with 1000 colourful paper cranes. The 366 cranes added were made by her classmates. On the statue they put these few words: *Peace on earth*.



Music education in Japan and Norway are quite similar. When I first visited a music lesson at Nakautchi Elementary School, I was met by the class playing recorders the same way we do in Norway. However, I think the Japanese students seem to be better skilled because the class played very well. By the way, most recorders used in the Norwegian schools are Japanese and made by Yamaha. I did not experience song in any of the schools I visited. However, most Japanese schools have their own school song which indicate that song is may be even more valued in Japan than in Norway.

Both music and sports are also popular activities many students choose to take at Yuku. The most popular Yuku activity seems to be piano lessons and swimming.

Physical Education and Martial Arts are both school subjects in Japan. Physical Education is compulsory while Martial Arts are elective in lower secondary school. Martial Arts like Judo, which is quite popular in Norway too, are not schools subjects in Norway, but popular leisure activity after school is over. Outside the school buildings in both Japan and Norway there are playgrounds. I could observe that even in the centre of the big Japanese cities they try very hard to give priority to enough space so the students can enjoy a playground. The activities you can observe are not very different from Norway as several ball-games seems to be the most popular in both countries. However, while soccer is most popular in Norway, baseball is most popular in Japan.

English and foreign language seems to be given less priority in the Japanese schools than in the Norwegian schools. Today Japanese students start to learn English in 7th grade. This is quite late. Since 1997 the Norwegian students start to learn English in 1st grade. I am not sure what is the reason for this low priority in Japan. I asked some educators about it and some answered they were afraid the children would be confused if they had to learn two languages very early and before they had learned their native language well enough. However, it seems like school authorities in Japan have recognized the dilemma. Now Japan is discussing putting more emphasis on foreign language too as part of their new educational reform. One argument they use is the fact we are living in an information age and we have to respond to the flow of information in foreign language, especially English. Personally I also experienced the ability to speak a foreign language was not so very good, neither in the schools nor in the society in general. This fact surprised me as I have always thought of Japan industry as very internationally oriented.

In *mathematics and science* Japanese students do very well on international comparative tests³. Therefore I was very curious about science and technology education. There seems to be a similar trend in both Japan and Norway that science is less popular than it used to be some years ago (Christiansen, 2001). This trend was confirmed by the upper secondary schools I visited. However, still about 50% of the upper secondary school students in Japan choose to take science, and they do very well, in spite of claiming they don't like the subjects.

In the West we tend to believe science education in Japan is very much based on facts, drills and also very much teacher oriented. However, this seems not to be true, at least not in primary schools. In contrary to Norway even the lower grades did practical experiments in the lab and the labs I visited were very



well equipped. Even in physics they had relevant equipment and did experiments. In biology the school had a lot of equipment and different kind of plants, fishes, clams and other species from the real world. These equipments were both used as part of regular classes as well as means of playing for the students. The students seemed to love taking care of it and keep it nice and clean and in well order.

Elementary schools built in Norway thirty years ago used to have a science lab. Unfortunately, today many of these labs are used for other purposes and the interest for science in the Norwegian schools is very low. However, in Japan the science laboratories are still in tact and used for the purpose they were meant. The Japanese students still learn to do experiments and to work in the science laboratory.



The students seem to get in touch with basic principles and procedures in a very systematic way. Also in the laboratory the students work in groups. Four students share one workstation. The station has a sink with hot and cold water, gas, towels and some basic equipment. From cabinets they collect the necessary equipment they need for the experiments, like they used to do in many Norwegian

schools too. The students do experiments in biology, chemistry and physics and they also have fairly adequate equipment. Physics is perhaps the weakest point in Norwegian education. In the Japanese lab I could see equipments such as: balance, gears, power supplies, measuring equipment, transformers, lenses, optical fixtures and electric fans.

Arts, Crafts and Technology education is organised slightly different in Japan and Norway. In Japanese elementary schools, grade 1-6, the subject is called Art and Handycraft (MESSC, 2000). The term Art and Handicraft is similar to the term used in Norway for all grades from grade 1-10, including lower secondary school. However, in Japanese lower secondary schools the subject is split into two different subjects: Fine Art (bijutsu) and the other called Industrial Art and Homemaking (kougeihin). The Industrial Art and Homemaking subject in Japan is also supposed to be very much related to Technology, which is integrated in several subjects in Norway, especially Science, Arts and Crafts. Industrial Art and Homemaking seem to have some elements similar to “Sloyd”, which until 1969 primarily used to be an activity for boys in Norway; and “Handarbeid” which until 1969 primarily used to be an activity for girls. However, both Japanese girls and boys now have to take Industrial Art and Homemaking today. The fact that many kinds of industries are very important in Japanese economy, might be one reason the Japanese students have to get familiar with Industrial Art as early as 7th grade. However, what about Norway, why do we put so little attention to these aspects of education?

Both in Japan and Norway Arts and Crafts education consist of three main topics: *Picture*, *Sculpture* and *Crafts*. Architecture, which is given more emphasis in the Norwegian 1997 curriculum, is probably not so dominant in the present Japanese curriculum.



Japan has a variety of traditional Arts and Crafts, which also can be observed in the schools. We know about the ancient Japanese from their clay figures made by the Jomon people who lived about 8.000 years ago. Consequently, the Japanese students, like the Norwegian students, learn to process clay and to make simple pottery. I have already mentioned *origami*, making things from paper. *Ikebana*⁴ is another original craft that can very often be observed in the schools as well as in or outside most homes and temples. Ikebana is the art of arranging

flowers. Ikebana most often gives you the impression that most Japanese enjoy naturalistic arrangements and passion for simplicity. Personally I am very fascinated by this style of art.

Finally there are a lot of Japanese fine arts as well as prints. The most famous print is called *ukiyo-e*, which is print on woodblock. However, I never observed that this technique, or similar techniques, was used in any of the schools I visited. Norwegian students learn similar techniques though they mostly use linoleum and rarely use woodblocks.

Technology is not a specific subject as part of compulsory education neither in Japan nor in Norway. However, technology is an important topic in modern education world-wide to day. The reasons are that new technology always tends to affect our individual life as well as our life environment in many ways. Therefore it was of special interest for me to try to investigate how technology education is carried out and how it is implemented in the regular subjects in Japan and Norway.

Mobile phones are the most obvious technological trend among young people, girls and boys, both in Japan and Norway. However, first I think it is necessary to discuss what technology is all about. In the Norwegian curriculum technology is mentioned quite often, but it is given a very broad definition (L97,s.26). In Japan the definition of technology seems to be rather narrow with more focus on skills, tools and products.



First of all technology is obviously related to a variety of products and things like mobile phones, cars, cameras as well as ordinary everyday tools in our homes. Secondly technology is processes and ways of doing things. In that sense we can talk about old technology as old type of processes and old ways of doing things, and modern technology as modern processes and modern ways of doing things. Technology is also related to knowledge and competence that is needed to develop or improve new products, services and processes. Technology also deals with ways of communication and cooperation. In this context extensive and growing use of mobile phones as well as computers in global networks are relevant aspects today. Finally, technology is also related to our society, our values and social relations.

My impression is that in the Japanese schools technology, so far, generally seems to be defined in a more narrow way than we do in Norway, and very much related to the tools, the techniques and the products mentioned above. However, let me use an example: The Kamban system I could observe during my visit to Toyota in Aichi. From the Norwegian perspective the Kamban is a type of modern technology because it is a complete new philosophy of production. Kamban is knowledge and a new way of doing things, rather than some specific physical tool or equipment. In this context there seem to be a gap between present practice and definition in Japanese schools and Japanese industry (Imai, 1997).



Technology in Japanese schools tend to be mostly related to the subject *Industrial Art and Homemaking* in lower secondary school. Industrial art in Japan also seems to put very much emphasis on skilled training and in making things, like in *Homeaking*, which have a long tradition in

Japan. The mug shown in the picture is a typical example of the variety of utility articles Japanese students make in schools and which also gives an idea about the skills that is involved in making them. In Norway today, education in the Arts and Crafts put more emphasis on the process, free creative activities and learning about art. In Japan, the final product seems to be more important. In Norway technology education seem to be more diffuse and associated with both Science as well as Arts and Crafts in particular. Both subjects are supposed to play an equal role. However, In Norway the Arts and Crafts subject has changed somewhat away from skills training, as it used to be in “Sloyd”, and more towards creative Fine Art, which seems to be a contemporary trend. Whether this is for good or the bad is hard to say for sure. However, I think in Norway it would be worth discussing and elaborating this aspect in more detail.

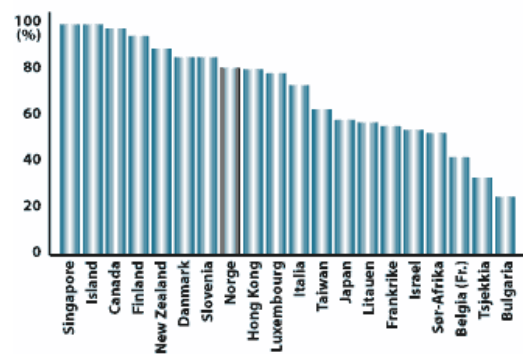


“*Plug the seven holes of waste*”, says the teaching of Buddha (1966). From early age in the school Japanese students seem to learn that Japan has few and little natural resources.

Therefore, reuse and to optimise the use of materials are considered to be very important. This philosophy also seems to be considered very important in the industry. The small pictures below show how the students at Showa Junior High School learn to transform the same can waste mentioned above, into a new product.

Information and Communication Technology is the basis for modern society, or what we tend to talk about as the information society. Mobile phones are already very popular among young students in Japan and Norway as well. In the Japanese schools they have computer labs and Internet very much the same way as the Norwegian schools. However, I was surprised to find that Japan and Norway only is in the middle stratum when it comes to the student's access to Internet in the schools. The strategy seems to be a little different. In Norway the philosophy is to implement information technology in almost all subjects. In Japanese plans science and mathematics are mentioned specifically.

UNGDOMSTRINNET: Andel elever på skoler der noen eller alle elever har tilgang til Internett. (SITES 1999)



The elementary school I visited in Gifu used drill programs in mathematics and word processing in other subjects like social science. They also had Internet and the principal told me that the students used Internet to collect information in a similar way to what we do in Norway. They did not seem to have the problem that the students could run into pages with information unsuitable for the children, like crime and pornography. At least they claimed so.



Web technology is about to be just as popular in Japan as it is in Norway. At Showa Junior High School I could observe very nicely made Web pages made by the students. The content was about a school excursion and you could also see the copies on a notice board in the hall, very nicely put up and arranged.

The computer equipment and the infrastructure used in Japanese schools is very similar to what is used in the West. I had expected to find more Japanese technology. However, IBM standard computers, Windows NT networks and classical worldwide Windows Office software were the most common. There was one difference to observe though. The Norwegian strategy has been to have a couple of computers in the regular classroom rather than in specific rooms. In the Japanese schools I visited computers in the classrooms were quite rare. Instead there were computer labs, often with 40 or 20 workstations so that a full class could be there at a time.



The Japanese society seems to be very focused on technology in general, and especially how to make and improve products for mass production and sale. The reason is fairly easy to understand. The Japanese survive by exporting goods all over the world. Therefore they constantly have to learn how to develop new technology and how to use it effectively. Therefore parents and often the whole family motivates their children very early to get in touch with and to learn about modern technology in different ways. The picture to the left is



an example of parent involvement in technology education. You can see a mother with her two children visiting Toyota Technology Institute in Nagoya, which offers a lot of activities and technical problems to solve for the children. In the case on the picture there are different blocks in a transmission system that have to be put together in a correct way in order to work. There is also a puzzle that can be put together like Lego blocks into different kind of function. In some cases I could

even see the whole family with children, mother and father, grandmother and grandfather having fun together experimenting with the different kind of devises and problems at The Toyota Technology Institute.

In Norway there are few similar chances for children to learn science and technology through playful activities, except for the toys they have in their homes. However, there are some pilot projects going on in some few primary schools.

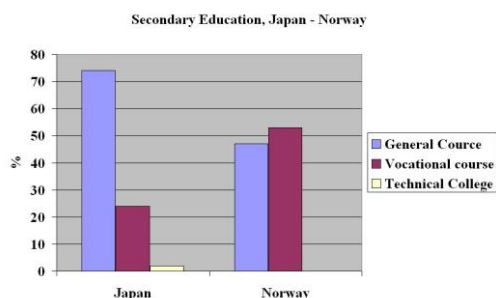
6. Evaluation, testing and “benchmarking”

Scheduled tests, and also standardized tests, are a lot more common in Japanese schools than in Norway. The most common method of testing in Japan is multiple choices. In Norway the students in elementary school, grad 1-7, do not get grades and they are not ranked, but in Japan the students are tested and ranked quite frequently. In both elementary schools and secondary schools I could observe they were talking about the “average score” in the different subjects compared with other schools, and also the “national score” for the subjects. The Japanese testing system indicates they put more emphasis on subject matters and on evaluating the student ability and progress than the Norwegian schools do. There are two aspects of testing students in Japanese schools. First there is a means of improving the students learning activities as well as the teaching. Second, and which is the biggest difference between Japanese schools and Norwegian schools, testing is an important means of preparations for entrance examinations. When the students want to advance to a more prestigious school, they have to compete against other students and pass an entrance test. In Norway such tests are very rare. However, in Japan entrance examinations seems to be the way of life.

There seem to be several complex reasons for this tradition of testing. I choose to put attention to historical reasons with roots in feudal society. The Japan society used to be a strict hierarchy of central leadership by the Shogun, many local leaders, the daymos, and the samurais who were their servants, government officials and worriers (Pezeu-Massbuaau, 1997). The country and the people were divided in districts or prefectures with little freedom of movement for the people. In many cases most people had to receive special permission to move travel from one district to another. It also used to be very difficult to move from one social class to another. The only way was to have special skills or to be picked by the upper class for some special reasons.

Today this structure still seems to exist in different companies, schools and universities. Some institutions have more prestige than others and they give better opportunities for the future. Therefore everybody still competes and tries very hard to be accepted by the best and most prestige group. Finally, this tradition fits well with competition philosophy in modern liberalistic economy (Horio,1994).

7. Transfer to secondary education



education.

In Japan most students continue in general courses while the Norwegian students almost equally divide into general and vocational courses. Japan also has five-year technical colleges that can be entered directly from compulsory education (9th grade). However, they are very few, most of them are national and the total number is about 65. In Japan a lot more students than in Norway take mathematics and science in secondary education.

8. The Japanese teacher

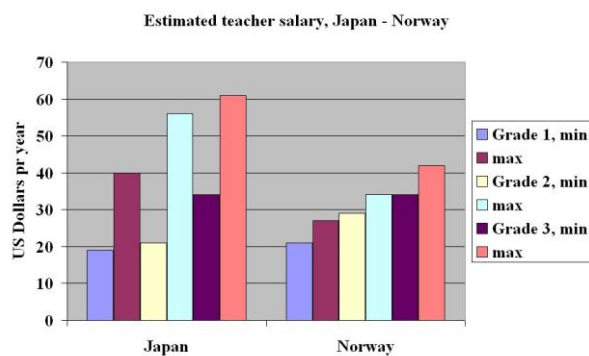
Effort and improvement are two key words to understand the teaching methods in Japanese schools. The philosophy seems to be that through effort everybody can improve and do better. It is basically a question about time, hard work and motivation. Teachers as well as parents have a patient and supporting attitude with the children who, in return, always seem to



try very hard over and over again. However, what's their inner motivation is, is very hard to understand. Finally, group mentality is also an aspect that seems to play an important role in learning as well as the social strategy in Japanese schools.

Japanese teachers are well educated, highly respected and fairly well paid. However, they also work very hard, they have a lot of students, their vacation is short and the school year is a lot longer than in Norway.

In elementary schools about 89% of the Japanese teachers have a four years bachelor degree, which is a little higher than it is in Norway. About 60 percent of the Japanese elementary school teachers are women. In Norway the figure is higher, about 75% and the trend is even less male teachers in the schools. In Japanese junior high schools the figure is lower, about 40% women and 60% men. In both Japan and Norway the elementary school teacher teaches all subjects. The teaching methods, at least in the elementary school I visited, were more modern and student as well as group oriented than I expected from what I had read about. There also seemed to be a lot of empathy and good relation between the teachers and the students. However, in higher levels of the education system the methods seem to be more traditional.



In Norway the teachers are ranked and paid on the basis of their education and the amount of years in school according to a national standard. In Japan the system is very different. The Japanese teacher has to take an appointment examination conducted by each prefecture. There are three different teacher certificates in Japan and the salary varies a

lot more than in Norway, also based on individual pay. The three certificates are: Second class certificate, which is the lowest, first class certificate and finally advanced class certificate. The difference is mostly determined by the amounts of credits in specialized subjects, which are classical school subjects like language, mathematics and history. In Norway too there have been some discussion about whether good teachers should be paid more than not so good teachers. However, so far there seem to be no signs this will be a reality in the near future.

Finally, my impression is that Japan is also changing very rapidly. Even the Japanese teacher students do not seem to behave the way they use to do before. In the picture to the right you can see a teacher student from Gifu with his piercing in his face. He was a very kind and friendly person to talk with, and his future students will probably enjoy him as their teacher. However, what about the older generation, the school authorities and the parents of the students? What will they be thinking about it? Only the future can tell for sure.



9. Educational reforms in Japan and Norway

Japan is about to implement a new comprehensive education reform by that they call “The Rainbow Plan” (MESSC, 2000). Norway implemented most of its latest education reform process during the 1990’s. 10 years of compulsory education, a legal right for 3 years of upper secondary education, new curriculum and new laws were implemented in Norway during the 1990’s.

There seem to be many similarities, though also some differences, between education reforms in Japan and Norway. Both reforms are very comprehensive and comprise almost all levels of education. The Japanese Rainbow Plan comprises seven priority strategies:

1: is about improving the students’ scholastic proficiency, which contains similar arguments as those that were used during the Norwegian reform process.

2: is about fostering a new generation. The Japanese plan use expressions like “Children’s Dream Fund” while we in Norway and Europe use expressions like the “Dream Society”. Information and communication technology (ICT) is one important element promoted in both countries.

3: is about improving learning environment, which indicate that Japan as well as Norway extend education beyond regular and traditional school subjects.

4: is about parent and community involvement. Such ideas are also implemented by the Norwegian reform. However, the children and the students’ rights seem to be stronger in Norway than in Japan.

5: is about teacher training and professional teaching, which I think seem to contain some differences. The Japanese reform seems to go for more awards, bonus systems and promotion of outstanding teachers than the Norwegian system does. Such ideas have been discuss in Norway too, but so far they have gained little support.

6: is about universities, which also has many similarities with a proposal put forward in Norway these days. One element is implementation of a strict international grading system that has been discussed in Norway for some time already.

7: is about new comprehensive educational laws. Such laws are already approved and implemented in Norway. However, it is too early to say whether there will be many differences or not.

10. Conclusion

This study indicates that there are many similarities between primary school education in Japan and Norway, and fewer differences than we tend to believe. In both countries primary school education is compulsory and most students go to national schools. However, in Japan there are more private lower secondary schools than in Norway. The subjects and the amount of hours spent on each subject are almost the same. However, the Japanese school year is a lot longer than in Norway and many Japanese students go to Yuku after school. Norway spends relatively more money on education than Japan, but it is hard to say this makes a difference in quality. However, there are more students in the Japanese classes.

The Japan curriculum does not include religion. Instead Japan has moral education. Moral education in Japan seems to be very emphasised as moral, as well as ethic, is an integrated element in the whole life at school. In Norway moral education is very much related to the subject about religions and view of life. The Japanese lower secondary schools have Industrial Art, which indicates they prepare for vocational education earlier than we do in Norway.

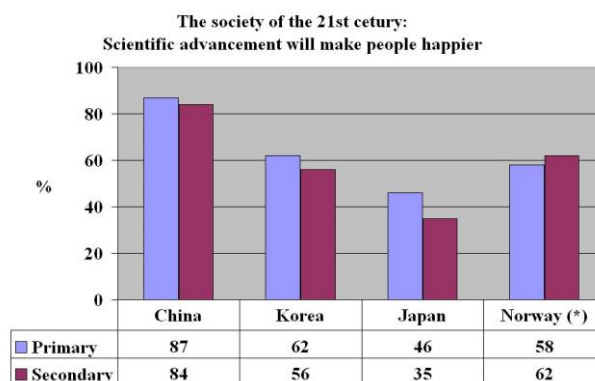
The Japanese schools seem to promote more order, discipline and respect while the Norwegian schools put more emphasis on creativity and individual freedom. Foreign language seems to be the weakest subject in the Japanese schools, while classical science topics are the weakest in the Norwegian schools.

From a Norwegian perspective the entrance examination system in Japan appears to be very rare and more or less the way of life for the young generation in Japan. The testing and motivation philosophy seems partly to be rooted in the old feudal society and partly due to the liberalistic economy in Japan after World War II (Horio,1994). This system makes everybody

fight very hard in order to be accepted by the best schools, the best universities and finally the best companies that give the best opportunities and security for future life.

Finally, the educational reforms in Japan and Norway also have many similarities. The biggest difference seems to be about the teachers. The Japanese government put more focus on awards, bonus systems and special promotions systems for outstanding teachers than the Norwegian government. The Japanese government also seems to take more concrete measures on incompetent teachers and teaching suspensions.

Finally, what about the future? My impression is that Japan is changing even more rapidly than Norway. Many new trends that appear in Norway often tend appear in Japan first. The younger generation in Japan does not seem to dream about a future job at Sony or Toyota (Christensen, 2001). In contrary to their parents many young Japanese like to be different, to stand out from the crowd and the traditions, and to make a different future. Their hopes and dreams do not seem to be related to more science and technology.



The graph above, made from a research carried out by the Japanese Ministry of Education, Science, Sports, Culture and Technology (MEXT, 2000)⁵, might be an indication of this post modern trend. The average Japanese student in lower and upper secondary school do not seem to believe that science advancement will make people happier in the years to come.

However, the most important question probably remains: What is a good school for young girls and boys today? What kind of education helps them develop the best possible life in a future society? May be both school systems need to be improved by more creativity and freedom for the individual student in Japan, and more order and system in the Norwegian schools?

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Notes

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- ¹ MEXT is the new name of the Japanese Ministry of Education Science, Sports, Culture and Technology. It used to be called MESSC. In Japanese it is called MONBUSHU. The ministry issues every year reports and papers about Japan education.
<http://www.mext.go.jp/english/index.htm>
- ² This chapter is partly based on information from the Korean studies at University of California. <http://socrates.berkeley.edu/%7Ekorea/history.html>
- ³ TIMSS. Third International Mathematics and Science Study.
<http://ustimss.msu.edu/>
- ⁴ Ikebana. This picture of flower arrangements is taken from Japan Information Network.
<http://jin.jcic.or.jp/>
- ⁵ MEXT (2000) The original study is made by MEXT, the Japanese Ministry of Education, Science, Sports, Culture and Technology. (*) The figures for Norway are not from the same study, but based on similar studies in Norway.
<http://www.mext.go.jp/english/index.htm>