

Secondary Science Teachers' Employment System in Japan – Science Teachers Employment System In Asian Regions –

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1. Introduction

It is highly interesting to compare the secondary science teacher employment system among Asian countries. For about three decades, it is highly too difficult to be a science teacher in Japan and at a same time there are so many people who want to be a science teacher in Japan. There are several factors which need to consider. There are several variables that need to be considered:

- (1) Population structure of the prefecture or big cities; historical population changes.
- (2) Changes of Educational Policy as a nation.
- (3) Changes of Educational Policy as a local prefecture or big cities.

2. Population structure or population changes

On 2007, the population of Japan is about 128,000,000 and this population will be goes down to 90,000,000 by 2055. Also, Japanese baby boomers are the people who were born from 1947 to 1952, where as the US baby boomers are the people from 1944 to 1963. Japanese baby boomers start finishing their job or retiring from their companies including teaching jobs. In the case of teachers at the public schools, retiring age is sixty years old, and on 2008, this year the people who was born on 1947 becomes 60 years old. According to the Table 1, the lowest numbers of new teachers at public schools was on 2000, but after that year the total numbers of new teachers at public schools are gradually increased and especially from 2008, the total number of the new teachers suddenly increased a lot. Also, because of the baby boomers' retirements, this will keep in the similar situation and we need more and more teachers at least for more than five years.

year	Total	Elementary Sch.	Junior High Sch.	Senior High Sch.
1980	45651	22710	11679	7130
1985	38239	11386	13485	10363
1990	33364	14039	9509	6774

1995	18407	6742	5414	4232
2000	11021	3683	2673	3060
2001	12606	5017	2790	3223
2002	16688	7787	3871	3044
2003	18801	9431	4226	3051
2004	20314	10483	4572	2985
2005	21606	11522	5100	2754
2006	22537	12430	5118	2674
2007	22647	11588	6170	2563
2008	26375	13317	7637	2908

Table 1: Changes of Numbers of Public School New Teachers in Japan, MEXT, 2007

3. Changes of Educational Policy as a nation

Every seven to ten years our National Curriculum Standards so called “Gakushu Shido Yoryou” have been revised. This year is the year of revising and I have been working as a vice chair for the middle school science. This time we are going to have many radical changes in a better way for science and mathematics.

First of all, the number of science lessons will be increased; 65 hours at the elementary school and 70 hours at the middle school level. Total agreement has been done that science, mathematics, and English are the subjects which need more hours for experiments and practices. In the case of middle school science, students will have 3 hours at the first grade, 4 hours at the second and third grade. Those are major changes of educational policy and those changes cause the changes of new teachers employment numbers for each local government.

4. Changes of Educational Policy as a local prefecture or big cities.

In our country, Japan, the employment of science teachers will be done by the Board of Education at each Prefecture Government and bigger city local government like Shizuoka City. So bigger Prefecture and bigger city where possesses lots of population need more science teachers. On the other hand, local prefecture where possesses small population does not need much more science teachers. In Japan, the educational policy are controlled by the central government, however, every prefecture has semi-independent Board of Education which can develop their own local policy for local education. So then, they will decide how many science teachers will need in certain year. In other words, competition rates to be a teacher is different depending on each prefecture or independent big city. Table 2 shows the top five low rates for competition at independent big city or prefecture. Also, table 3 shows the top five high rates for competition at independent big city or prefecture. These data shows that it

is highly difficult to be a teacher, although in a highly populated area it is rather easier to be a teacher. However, it is also true that there are huge people who want to be a teacher in Japan. It is because teaching job is identified as one of the highly stable life-long job in Japan.

Lower competition			Higher competition		
1	Osaka City	4.2 times	1	Akita Pref.	40.1 times
2	Kawasaki City	4.7 times	2	Tottori Pref.	39.5 times
3	Yokohama City	4.9 times	3	Fukushima Pref.	30.0 times
4	Shizuoka City	5.0 times	4	Kochi Pref.	23.4 times
5	Shizuoka Pref.	5.2 times	5	Kagawa Pref.	22.0 times

Table 2. Prefectures and Competition Rates in Lower and Higher Competition at Middle Schools

Lower competition			Higher competition		
1	Nara Pref.	5.8 times	1	Kochi Pref.	24.3 times
2	Gifu Pref.	7.6 times	2	Miyazaki Pref.	24.3 times
3	Kanagawa Pref.	7.8 times	3	Kyoto Pref.	22.7 times
4	Yamanashi Pref.	8.0 times	4	Ooita Pref.	22.6 times
5	Fukuoka City.	8.3 times	5	Shizuoka Pref.	21.9 times

Table 3. Prefectures and Competition Rates in Lower and Higher Competition at High Schools

5. Processes to select science teachers at middle schools and high schools

Processes to select science teachers at middle schools are basically very similar prefecture by prefecture or independent city by independent city. As a sample of prefecture or independent city selection process, let me pick up the case of Shizuoka Prefecture.

Case of Shizuoka Prefecture

There are two steps for the selection system. First level examinations include general common knowledge and special knowledge as a teacher (60minutes), knowledge on science (80 minutes for middle school and 90 minutes for the high school) and interview examination (20 minutes). For the case of last year, question one; among twelve basic knowledge questions there was one science question that is "One of the planets around the sun does not count as the planet any more. Please choose one from the item."(Pluto) Question no.2 was the question on copy right. Question three was the one about developmental psychology. Question four to seven was on various theory on education. Question five was on the educational law. Question eight was on bullying. Question nine was on special activities at school. Question 10 was on academic and career counseling. Question eleven was on prevention of crimes and safety.

The level of science examination usually from the high school level science for the middle school science; which are Physics, Chemistry, Biology, and Earth Science. For the high school science candidates, the level of questions for Physics, Chemistry, Biology and Earth Science is usually from the undergraduate general knowledge of those four areas. Last part of the first level examination is interviewing examination for about 20 minutes where many different types of questions on many subjects.

Second level examinations include group interviewing examination and individual interviewing examination. In the case of Shizuoka Prefecture Middle School, the group interviewing of five candidates discussed with others having three evaluators for about 30 minutes. Individual interviews generally include demonstration of science teaching and different topic questions as a teacher. Patterns of Second level examination will be changed year by year. So, then depending on each Prefecture the contexts and contents of interviewing examination is different.

Recently, at OhitaPrefecture,topofficerofthedivisionofpersonnelwaschargedwithbribery. So, then Japanese Ministry of Education (MEXT) have official order on the clear system for the selection process. Then the Board of Education at each Prefecture and independent cities starts announcement to change their system to be clear and open for the outside evaluators.

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