

Country Name	Teaching Methods Improvement Project towards Children's Development
Mongolia	

I. Project Outline

Background	<p>The Government of Mongolia introduced the New Education Standards in September 2005 within the framework of education sector reform, which focused on shifting from a 10-year basic education system to a 11-year education system, lowering the school entry age from 8 to 7, and introducing new subjects such as integrated learning, natural science (integrated science), etc. (the basic education system changed into a 12-year system and further lowered the school entry age to 6 in 2008). Moreover, the teaching methods were expected to change from conventional methods that emphasized memorization to methods that encouraged children's imagination and ideas such as "teaching methods which support children's development." However, teachers were unable to grasp and use the new teaching methods as they had been trained in conventional methods of teaching based on memorization. Also, the New Standards were drawn up mainly by university professors and their contents were too academic for teachers to put them into practice. On the other hand, the Teaching Methods Improvement Centers under the Mongolian State University of Education and the National University of Mongolia as well as the Institute of Education studied new teaching methods with referencing from examples of foreign countries. To address these challenges, the Government of Mongolia requested Japan which has provided assistances for science and mathematics education, for a technical assistance project to improve the teaching methods.</p>														
Objectives of the Project	<p>The project aimed at a study of teaching methods which support children's development in accordance with the New Education Standards (hereinafter referred to as "the Teaching Methods"), development of Teacher's Guidebooks and Teacher's Guidebook Development Manual based on the Teaching Methods for 8 subjects (Arithmetic, Math, Primary Science, General Science, Chemistry, Physics, Integrated Studies and IT), and practice of Teaching Methods with the use of Teacher's Guidebooks at the trial lessons in 9 model schools in Ulaanbaatar City, Dornod Aimag* and Selenge Aimag, thereby aiming at disseminating the Teaching Methods to other schools besides the model schools in the 3 City/Aimags in the future. The Overall Goal and Project Purpose set forth are as follows.</p> <p>*Note: Aimag is an administrative unit used in Mongolia</p> <ol style="list-style-type: none"> Overall Goal: The Teaching Methods are disseminated in model Aimags and City. Project Purpose: The Teaching Methods are developed in accordance with the new educational standards introduced in primary and lower secondary education. 														
Activities of the Project	<ol style="list-style-type: none"> Project site: Ulaanbaatar City, Dornod Aimag and Selenge Aimag Main activities: 1) Development and improvement of the Teacher's Guidebooks and Teacher's Guidebook Development Manual based on the Teaching Methods by Working Groups (consisting of lecturers of the 4 Teaching Methods Improvement Centers and teachers of model schools) for the 8 subjects; 2) Implementation of trial lessons using the developed Teacher's Guidebooks at the model schools (3 each in the model City/Aimags, 9 schools in total); 3) Development and practice of monitoring model to see introduction and continuous practice of the Teaching Methods. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td colspan="2">Japanese Side</td> </tr> <tr> <td>1. Experts: 12 persons</td> <td>Mongolian Side</td> </tr> <tr> <td>2. Trainees received: 18 persons</td> <td>1. Counterpart allocation: 19 persons</td> </tr> <tr> <td>3. Equipment: Computer, digital camera, video, etc. essential for Teacher's Guidebooks development, trial lessons, lesson study, etc.</td> <td>2. Office space for experts</td> </tr> <tr> <td></td> <td>3. Local cost</td> </tr> </table> 					Japanese Side		1. Experts: 12 persons	Mongolian Side	2. Trainees received: 18 persons	1. Counterpart allocation: 19 persons	3. Equipment: Computer, digital camera, video, etc. essential for Teacher's Guidebooks development, trial lessons, lesson study, etc.	2. Office space for experts		3. Local cost
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Ex-Ante Evaluation	2006	Project Period	May 2006 – July 2009	Project Cost	278 million yen										
Implementing Agency	Ministry of Education, Culture and Science (MECS), Mongolian State University of Education (Elementary Education Improvement Center, Mathematics Education Improvement Center, IT Education Improvement Center), and National University of Mongolia (Science Education Improvement Center)														
Cooperation Agency in Japan	KRI International Corporation														

II. Result of the Evaluation

Note 1: (Constraints during the Evaluation Study) The Phase 2 of this project was conducted in 2010-2013 and some words used in this project were changed in the aftermath while the concept of "Teaching Methods" itself was taken over to the Phase 2. The field survey for this ex-post evaluation was therefore conducted by an interview survey, not a questionnaire survey to have the survey respondents correctly understand the meaning of survey questions. In addition, Mongolia has a vast land as well as many schools are scattered over a large area. Due to these factors, the number of schools visited was limited in the ex-post evaluation (1 in Ulaanbaatar City, 3 in Dornod Aimag and 2 in Selenge Aimag, 6 in total out of 9 model schools as well as 1 Selenge Aimag and 3 in Darkhan-Uul Aimag, 4 in total for non-model ones).

Note 2: Regarding the Indicator 2 of Project Purpose "The number of lessons that the Teaching Methods are practiced (excluding trial lessons by the project)," the rate of teachers who practice the Teaching Methods was used as the alternative indicator in the Terminal Evaluation. The rate of teachers in practice is used for the Indicator 2 in the Ex-post Evaluation as well.

1 Relevance

<Consistency with the Development Plan of Mongolia at the time of Ex-ante Evaluation and Project Completion>

The project was consistent with the national development plan "Economic Growth Support and Poverty Reduction Strategy" (approved in Sep 2003) as well as the education sector plans "Policy Implementation Strategy and Planning" (2004-2006) and "Master Plan of

Education” (2006-2015) with the aim of ‘improvement of quality of education through the development of new teaching methods.’

<Consistency with the Development Needs of Mongolia at the time of Ex-ante Evaluation and Project Completion >

The project met the needs of development of teacher’s guidebooks by Mongolian side under the New Education Standards introduced in 2005 where teachers were to perform lessons in accordance with the Teaching Methods.

<Consistency with Japan’s ODA Policy at the time of Ex-ante Evaluation>

The project was consistent with the Japan’s “Country Assistance Program” (November, 2004) which placed ‘support for institution building and human resource development necessary for promoting a market economy’ as one of the four priority areas and placed basic education as one of the priority issues under that.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement for Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the project completion. The Teacher’s Guidebooks for 24 units of the 8 subjects were developed in accordance with the Teaching Methods (Indicator 1) and teachers who participated in trial lessons in the 9 model schools started to implement the Teaching Methods even outside the trial lessons (Indicator 2). Besides, positive changes in children who had classes with the Teaching Methods were reported such as speaking out their own ideas and opinions, actively participating in classes, etc. (Indicator 3).

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The effects described above have generally continued even after the project. According to the results of interview survey with the 6 model schools visited, the Teacher’s Guidebooks have been continuously used and according to teachers and learning managers (Vice-Principal) in the 6 schools, more than 80% of teachers have practiced the Teaching Methods. The apparent positive influences towards children who have undergone classes with the Teaching Methods are also reported as the improvement in self-expression, enforcement in teamwork and improvement in academic performance, etc.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been mostly achieved. Regarding the Indicator 1, the rate of teachers who are using the Teacher’s Guidebooks within the model City/Aimags is 80% in Ulaanbaatar City, 74% in Dornod Aimag and 96% in Selenge Aimag. The reasons behind why each model City/Aimag does not reach 100% are that teachers who are not in charge of the 8 subjects have not used the Teacher’s Guidebooks. Henceforward, it is anticipated that the Teacher’s Guidebooks for other subjects will be developed by the “Institute of Upgrading Teacher’s Professional” under the support of the Education Improvement Centers so that the rate of teachers in use will increase accordingly in the future. Regarding the Indicator 2, the rate of teachers who are practicing the Teaching Methods within the model City/Aimags is 52% in Ulaanbaatar City, 60% in Dornod Aimag and 100% in Selenge Aimag. The reason behind the slightly low rate in Ulaanbaatar City and Dornod Aimag is as described above, due to the subjects that do not have the Teacher’s Guidebooks and there are so many teachers especially in Ulaanbaatar City that it needs more time to increase the teachers who practice the Methods compared with other Aimags, but a future increase in the practice rate is also expected with the development of Teacher’s Guidebooks for such subjects. The dissemination of Teaching Methods among schools other than the model schools within the model City/Aimags after the project would be realized by the factors that the Institute of Upgrading Teacher’s Professional was established after the project in 2012, which would in turn contribute for the Teaching Methods to be reflected through training for in-service teachers and that non-model schools of Ulaanbaatar City were included in the target schools of the Phase 2 of this project.



Scenery of class at a model school in Selenge Aimag

<Other Impacts at the time of Ex-post Evaluation>

Regarding the dissemination situation of Teaching Methods outside the model City/Aimags, according to the results of interview survey with 3 schools in Darkhan-Uul Aimag which is not the target Aimag of Phase 2, 100% of teachers at 2 schools are practicing the Teaching Methods while another school is 48%. According to the Institute of Upgrading Teacher’s Professional, while the concept of Teaching Methods have been disseminated in every Aimag, the difference in the incorporation method of every school in each Aimag makes it hard to illustrate the nationwide dissemination rate based on the number of Aimags. Assuming that the Teaching Methods have been disseminated even outside the model City/Aimags, a progress on the dissemination towards other parts of the country was made by the implementation of Phase 2 of the project and as described above, the Teaching Methods are reflected in the training for in-service teachers conducted at the Institute of Upgrading Teacher’s Professional. On the other hand, no negative impact on the natural and social environment due to the project has been observed.

<Evaluation Result>

The project achieved the development of Teaching Methods for the 8 subjects in accordance with the New Education Standards and has reasonably disseminated the Teaching Methods into the model City/Aimags of Ulaanbaatar City, Dornod Aimag and Selenge Aimag. Furthermore, the dissemination of Teaching Methods outside the model City/Aimags has been observed. Therefore, the effectiveness and impact of the project are high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) The Teaching Methods are developed in accordance with the new educational standards introduced in primary and lower	1. Developed Teacher’s Guidebooks	<u>Status of achievement: Achieved</u> (Project Completion) The 8 subjects and 24 units worth of Teacher’s Guidebooks and the Teacher’s Guidebook Development Manual were developed. (Ex-post Evaluation) After the project, even with the curriculum revision in 2013, which changed part of the subjects such as from ‘Integrated Studies’ to ‘The Power to Live,’ the Teacher’s Guidebooks have been continuously used.

secondary education.	2. The number of lessons that the Teaching Methods are practiced (excluding trial lessons by the project)	<p><u>Status of achievement: Achieved</u> (Project Completion) 66 out of 71 (93%) teachers who practiced trial lessons in the model schools stated that they were practicing the Teaching Methods even outside the trial lessons. (Ex-post Evaluation) For the 6 out of the 9 model schools, the number of teachers, number of teachers who practice the Teaching Methods and rate of teachers who practice it after the project period are as follows.</p> <table border="1" data-bbox="600 241 1528 409"> <thead> <tr> <th></th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> </tr> </thead> <tbody> <tr> <td>Number of teachers</td> <td>232</td> <td>233</td> <td>232</td> <td>236</td> <td>241</td> <td>245</td> </tr> <tr> <td>Number of teachers in practice</td> <td>187</td> <td>195</td> <td>199</td> <td>204</td> <td>206</td> <td>206</td> </tr> <tr> <td>Practice rate</td> <td>81%</td> <td>84%</td> <td>86%</td> <td>86%</td> <td>85%</td> <td>84%</td> </tr> </tbody> </table> <p>After the project, while there are some teachers who referred back to the conventional teaching methods as well as newly appointed teachers who have not practiced the Teaching Methods yet, more than 80% of teachers have practiced the Teaching Methods.</p>		2010	2011	2012	2013	2014	2015	Number of teachers	232	233	232	236	241	245	Number of teachers in practice	187	195	199	204	206	206	Practice rate	81%	84%	86%	86%	85%	84%
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	3. Change of children's attitude towards lessons	<p><u>Status of achievement: Achieved</u> (Project Completion) According to the teachers who practiced trial lessons in the model schools, it was reported that children developed into stating their own thoughts and opinions, actively participating in classes, performing experiments and observations, increase in their willingness to learn, less likeliness of being terrified of making mistakes, evident teamwork between children, etc. (Ex-post Evaluation) According to teachers in the model schools, in addition to the changes above, there are positive reports of children's skills in such improvements of self-expression that explaining situations and speaking have vastly been enhanced, and teamwork established. Also, the increase in children's active participation in class has contributed to improving their grades.</p>																												
(Overall Goal) The Teaching Methods are disseminated in model Aimags and City.	<p>1. Developed Teacher's Guidebooks are distributed and utilized (read) in 100% of schools in the model Aimags and City.</p> <p>2. The Teaching Methods are practiced in 70% of teachers in the model Aimags and City.</p>	<p><u>Status of achievement: Mostly achieved (both indicators)</u> (Ex-post Evaluation) The number of schools, number of teachers, number of teachers who use (including 'read') Guidebooks, rate of utilization of Guidebooks, number of teachers who practice the Teaching Methods and rate of teachers who practice it in each model City/Aimag are as follows.</p> <table border="1" data-bbox="600 1016 1528 1216"> <thead> <tr> <th></th> <th>Number of schools</th> <th>Number of teachers</th> <th>Number of teachers in use</th> <th>Utilization rate</th> <th>Number of teachers in practice</th> <th>Practice rate</th> </tr> </thead> <tbody> <tr> <td>Ulaanbaatar</td> <td>217</td> <td>9,845</td> <td>7,876</td> <td>80%</td> <td>5,120</td> <td>52%</td> </tr> <tr> <td>Dornod</td> <td>25</td> <td>749</td> <td>552</td> <td>74%</td> <td>452</td> <td>60%</td> </tr> <tr> <td>Selenge</td> <td>32</td> <td>857</td> <td>822</td> <td>96%</td> <td>857</td> <td>100%</td> </tr> </tbody> </table> <p>Although the Guidebooks are not used by all teachers in the model City/Aimags, it is in fact hard to reach 100% level of achievement as the teachers who are not in charge of the 8 subjects are included in the table above, so the Indicator 1 is judged to be mostly achieved. With the curriculum reform in 2013 where it was considered to introduce the Teaching Methods in all subjects, it is expected that the Guidebooks for other than 8 subjects will be developed and used in the future. While the practice rates of Teaching Methods in Ulaanbaatar City and Dornod Aimag are less than 70%, the average rate of 3 City/Aimags is 70%, so the Indicator 2 is also judged to be mostly achieved. In Selenge Aimag, while the utilization rate of Guidebooks is 96%, the practice rate of Teaching Methods is 100%, which means that the teachers in charge of subjects that have no Guidebooks are learning about the Teaching Methods from peer teachers and supervisors and trying to practice the Methods.</p>		Number of schools	Number of teachers	Number of teachers in use	Utilization rate	Number of teachers in practice	Practice rate	Ulaanbaatar	217	9,845	7,876	80%	5,120	52%	Dornod	25	749	552	74%	452	60%	Selenge	32	857	822	96%	857	100%
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Source: Internal documents, interview with MECS, Department of Education and Culture (DEC) of each model City/Aimag, teachers in model schools, etc.

3 Efficiency

The project period was as planned (ratio against the plan: 100%). In regard to the project cost, the Mongolian side agreed at the ex-ante evaluation to pay the transportation cost for attending trial lessons, but in reality part of the cost was not provided and the Japanese side supplemented it, which led to the project cost exceeding (ratio against the plan: 136%). Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

While the New Education Standards introduced in 2005 are actually not effective at the time of ex-post evaluation due to the curriculum reform in 2013, the Government of Mongolia has continued to maintain the utilization and dissemination of the Teaching Methods nationwide and the "State Policy on Education Development" (2014-2024) shows evident propulsion towards classes that would bring out the ability of children. The evaluation of teachers and children would not only be based on the academic performance but also be based on the standard of how children's ability has been developed in accordance to the Ministerial Decree. In such, it can be expected that the Government would continue its policy to disseminate the Teaching Methods.

<Institutional Aspect>

At the national level, the Teaching Methods are integrated into the training of in-service teachers conducted at the Institute of Upgrading Teacher's Professional established in 2012 and training participants have learned about the Teaching Methods, so from onwards on under the "State Policy on Education Development," the current system for the dissemination of Teaching Methods will be maintained. At the model City/Aimag level, Ulaanbaatar City disseminates the Teaching Methods by implementing a lesson study twice a year, where

more than 100 teachers are invited every time. Within Dornod Aimag and Selenge Aimag, 12 and 15 supervisors each visit schools in the Aimag and instruct the Teaching Methods to teachers. It can be seen that there is no special problem with the current system itself for disseminating the Teaching Methods at the model City/Aimags, but it is difficult for them to increase the number of implementation of lesson study as well as the number of visit by supervisors due to their budget constraints and it will take some time for Ulaanbaatar City and Dornod Aimag to increase the rate of teachers who practice the Teaching Methods as much as the rate of Selenge Aimag.

<Technical Aspect>

The technical guidance of Teaching Methods towards teachers, under a cooperation system of the Institute of Upgrading Teacher's Professional and the Mongolian Association of Lesson Study, has been effectively conducted by a professional team in a human resource agency (including teachers in the model schools) developed by the project. Also, the Teacher's Guidebooks and Teacher's Guidebook Development Manual made by the project are now available as an electronic version at the MECS's homepage, which are easily obtained by every teacher. In addition to the Guidebooks, there are plenty resources for the Teaching Methods including training manuals that were created in the Phase 2, which are of reference to every DEC or school. In addition, the Institute of Upgrading Teacher's Professional is capable to develop guidebooks for other subjects so that there is no special problem in the technical aspect as well.

<Financial Aspect>

With the policy of "Development of Each Child" in 2012, which gives importance to the quality of education, the capacity improvement budget for teachers in MECS (including training budget for teachers such as the budget for dissemination of Teaching Methods) has substantially increased from 690 million MNT (approx. 42 million yen) in 2012 to 3.5 billion MNT (approx. 0.2 billion yen) in 2015. However, the budget allocation from MECS to every City/Aimag has not increased so much and DEC's of the model City/Aimags indicate that their current budgets are not so much enough to disseminate the Teaching Methods within the City/Aimags. As long as the current policy is maintained, their allocated budget will also be maintained, but henceforth, the future increase in budget is uncertain as well as there is almost no budget support from donors to each City/Aimag.

<Evaluation Result>

Some problems have been observed in terms of financial aspect of the implementing agency. Therefore, sustainability of the project is fair.

5 Summary of the Evaluation

The Project Purpose of "the Teaching Methods are developed in accordance with the new educational standards" was achieved by the end of the project and the Overall Goal of "the Teaching Methods are disseminated in the model City/Aimags" has been mostly achieved at the time of ex-post evaluation. Furthermore, the Teaching Methods developed by the project have been disseminated into other Aimags besides the model City/Aimags. However, regarding the sustainability, the budget for teacher training at the local level allocated from MECS is not enough as well as a future prospect at the budget table for the dissemination of Teaching Methods is not certain, so the financial aspect is the issue that needs to be addressed. In addition, due to the aspect that part of training cost to be borne by the Mongolian side was actually borne by the Japanese side, the project cost exceeded the plan.

In light of the above, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

<Recommendations for Implementing Agency>

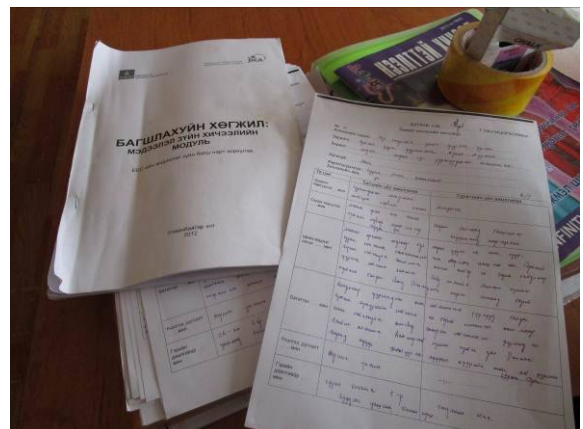
According to the result of interview to those involved with the project, there were a lot of opinions that it was more difficult for more experienced veteran teachers to comprehend the importance of Teaching Methods and change their method of teaching. During the interval of time that the current MECS's policy is effective, the training for in-service teachers should be conducted for even teachers who teach more than 10 years while the current in-service training covers teachers with less than 10 years of experience and it is desirable for MECS and the Institute of Education to renew the teaching license and conduct training on the Teaching Methods accordingly.

<Lessons Learned for JICA>

It was found that the Teacher's Guidebooks developed by the project had been still used by a number of teachers. It has contributed to the continuous use of Guidebooks that not only the JICA experts but also the lecturers of the Teaching Methods Improvement Centers and active teachers, etc. were engaged in developing the Guidebooks, which helped the Guidebooks to be user-friendly for teachers in the field. It will ensure a medium- to long-term use to involve various stakeholders, users in particular, and reflect their views in developing manuals and guidelines such as Teacher's Guidebooks, which intend to be widely and long used by target users.



Teacher's Guidebooks available at the library of a model school in Dornod Aimag



Some teachers copy the Teacher's Guidebooks for their use