

Republic of Uzbekistan

Ex-Post Evaluation of Japanese Technical Cooperation Project
“The Nursing Education Improvement Project”

External Evaluator: Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

0. Summary

This project was conducted to establish a new nursing education model based on the concept of “Client-Oriented Nursing”¹ (hereinafter referred to as “CON”) in Uzbekistan. The project direction was consistent with Uzbekistan’s strategy, which emphasizes reforming the healthcare system, and Japanese assistance policy, which prioritized reconstruction of the healthcare system and medical personnel education. It also met the needs to enhance the quality of medical workers in Uzbekistan, hence the relevance is high. The project introduced new nursing education via the model Medical College (hereinafter referred to as “MC”), by modifying the curriculum and teaching material, and developing facilities and medical equipment to disseminate the CON concept. The nursing education model based on the CON concept has been introduced at all MCs in Uzbekistan at the time of the ex-post evaluation, therefore its effectiveness and impact are both high. The efficiency of this project is moderate since more input than planned was required as the cost to improve understanding of the new CON concept exceeded the original estimate. Its sustainability is considered high, because new nursing education has been disseminated and implemented steadily at all MCs nationwide, despite minor concern over the future role of Nursing Education Center (hereinafter referred to as “NEC”), which has responsibility for retraining MC teachers.

In light of the above, this project is evaluated as highly satisfactory.

1. Project Description



(Project Location)



(Clinical Practical Classes for Child Health Nursing at MC)

¹ Client-Oriented Nursing involves providing nursing and life support based on the needs of each patient’s life cycle stage, such as childhood, puberty, adulthood and elderly stages.

1.1 Background

The government of the Republic of Uzbekistan (hereinafter referred to as “Uzbekistan”) introduced reform of the healthcare system to differentiate the medical service which was established during the former Soviet Era and practiced till the country’s independence in 1991. Uzbekistan issued “the Decree of the President”² in November 1998, since which time the health and medical system have both been comprehensively reformed. In 1999, efforts started to improve the nursing education system as one of the priority areas; namely “advancing education for healthcare personnel” to promote the upgrade of nursing and contribute to better medical services for people in Uzbekistan. By analyzing healthcare systems in developed countries, Uzbekistan, where nursing work was considered a subsidiary duty of doctors, recognized that technical trained nurses could play key roles in national healthcare and that the nursing education system had to be improved to enhance medical services. As part of this improvement, the Ministry of Health of Uzbekistan (hereinafter referred to as “MOH”) decided that all medical institutions should be turned into three-year medical colleges by 2005. Moreover, nursing faculties were also annexed onto the faculties of medicine of universities for advanced training after medical college.

Under these circumstances, Uzbekistan requested technical cooperation on nursing education and nursing management from the Government of Japan, which had conducted technical assistance by dispatching short-term experts in the nursing field. Subsequently, the Government of Japan commenced the project from July 2004 with MOH and the Ministry of Higher and Secondary Specialized Education (hereinafter referred to as “MOHSSE”) in Uzbekistan as counterpart organizations.

1.2 Project Outline

Overall Goal	Nursing education, based on “Client-Oriented Nursing (CON)” is innovated in medical colleges throughout the country.	
Project Objective	An educational model based on CON is established.	
Outputs	Output 1	Concept of CON is introduced into in-school education at First Republic Medical College (FRMC).
	1-1	Teaching plan and teaching program based on CON for FRMC are approved by MOH and MOHSSE.
	1-2	Teaching guidelines for 7 subjects are prepared based on CON.
	1-3	Teaching method of CON is understood by the nursing teachers.
	Output 2	CON practice teaching is introduced in the model hospital.
Output 3	Standard of nursing education (teaching plan and teaching program) is proposed.	
Inputs	Japanese Side: 1. 108 Experts	

² Presidential Decree No. 2107, issued on November 10, 1998.

	<p>5 for Long-Term 103 for Short-Term</p> <p>2. 39 Trainees received</p> <p>3. Equipment 33.30 million yen</p> <p>4. Local Cost 58.73 million yen</p> <p>Uzbekistan Side:</p> <p>1. 6 Counterpart(s)</p> <p>2. Land and Facilities (Renovation of NEC) 3.6 million yen</p> <p>3. Operation Cost for NEC 20.2 million sum (As of December, 2008 at the exchange rate of 1US\$=1,362.43 sum)</p>
Total cost	591.7 million yen
Period of Cooperation	July, 2004 – June, 2009
Implementing Agency	Ministry of Health, Ministry of Higher and Secondary Specialized Education
Cooperation Agency in Japan	Oita University of Nursing and Health Science
Related Projects	(Technical Assistance) Short-Term Experts: Nursing (1999), Nursing Advisors (2000 and 2001), Nursing Management, Community Health Nursing and Emergency Nursing (2002) (Grant Aid) The Project for Improvement of Nursing Education System(Exchange of Notes: April 2003)

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement of Overall Goal

It was mentioned that MOH intended to disseminate CON education step by step³ and complete it by 2012 since the project targeted “100% of MCs starting education based on CON by 2012” as an indicator to be achieved. The terminal evaluation report in 2009 pointed out that MOH had to make considerable effort, e.g. such as upgrading nursing teachers, developing teaching materials and renovating MCs to disseminate the integrated Teaching Plan to all MCs by 2012.

1.3.2 Achievement of Project Objective

The project set verifiable indicators for project purposes, such as “70% of First Republic MC (hereinafter referred to as “FRMC”) graduates passing a comprehension test on CON”. Though the comprehension test was scheduled for June 2009, test and questionnaire surveys were conducted at the time of the terminal evaluation to capture the student’s comprehension. Consequently, only 25% of students received a pass mark, but it was pointed out that the project purpose would be achieved by the end of the project, considering conditions such as “the comprehension test was implemented without

³ Since it was difficult to implement upgrading of the nursing teachers and prepare practical equipment for all MCs at the same time, MOH intended to first disseminate CON education to MCs in Tashkent city, followed by those in Tashkent province and core MCs in each areas, and finally all MCs.

advance notice,” or “students were unfamiliar with paper-based and multiple choice methods.” Furthermore, it was also noted that each output progressed as planned, teacher’s comprehension on CON improved, and the development of facilities of MC also progressed.

1.3.3 Recommendations

Recommendations were made to the NEC⁴, MOH and JICA. Those for NEC involved continuing the comprehension test or questionnaire for MC teachers and holding seminars. MOH was recommended to provide human resources and financial support to NEC. Finally monitoring and following up on the NEC management situation was recommended to JICA.

Following the above recommendations, NEC has conducted comprehension tests for MC teachers who take the upgrading training. When CON was introduced to MCs, a seminar for the director of each MC was held with the support of MOH. MOH also has continued supporting NEC, for example, by arranging the dispatch of teachers from medical universities to NEC, and providing financial support. Regarding JICA, a follow-up survey for medical equipment was conducted.

2. Outline of the Evaluation Study

2.1 External Evaluator

Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

2.2 Duration of Evaluation Study

Duration of the Study: September, 2012 – August, 2013

Duration of the Field Study: November 20-December 4, 2013 and February 18-23, 2014

3. Results of the Evaluation (Overall Rating: A⁵)

3.1 Relevance (Rating: ③⁶)

3.1.1 Relevance to the Development Plan of Uzbekistan

As for the project planning, a sectoral development plan was placed to follow since there was no integrated development policy based on mid and long-term perspectives in Uzbekistan⁷. At that time, the President’s “National Health Reform Program” Decree was issued and “reforming nursing education” was promoted as a goal of one of the 12

⁴ NEC is the executing agency established at the beginning of this project, which adopts the role of implementing the re-training program for teachers of MCs based on the CON concept.

⁵ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁶ ③: High, ②: Fair, ①: Low

⁷ Source: “Country Specific Evaluation Report for Uzbekistan and Kazakhstan (2004)”

priority plans, namely to improve training quality.

Presidential Decree No.3923 ,“Main directions of further deepening the reform and implementation of the National Healthcare Development Program”, adopted in 2007 also prioritized reform of medical personnel education and promotion of reform on retraining. Thus, the importance of promoting reform of the healthcare system and medical personal education, including nursing education, was confirmed, even at the time of project completion. In addition, a Welfare Improvement Strategic Paper (2009-2010), which was formulated with the support of development partners including World Bank, Asian Development Bank and United Nations Development Programme, etc., also emphasized integrated development, quality improvements on public services such as, health and education as well as equitable income distribution, and clearly stated that the plan aimed to improve the quality of medical services.

The project was therefore consistent with Uzbekistan’s health policy for improving the quality of medical personnel; both at the time of the ex-ante evaluation and project completion.

3.1.2 Relevance to the Development Needs of Uzbekistan

In Uzbekistan, the role of nurses was limited to assisting doctors at the time of the project planning and they were not required to engage in nursing on their own initiatives. Nursing education also focused on teaching knowledge and techniques for nurses in their subsidiary role to doctors. Accordingly, reform of nursing education was set as a super goal in “improving the quality of training for medical personnel” of the National Health Reform Program, hence training and upgrading of medical personnel were required. Meanwhile, it was crucial to retrain MC teachers because most were originally doctors without nursing education⁸. Most importantly, a lack of CON concept the international tendency stresses and Primary Health Care (hereinafter referred to as “PHC”) in medical services had been previously pointed out by short-term experts dispatched by JICA and the need to resolve these circumstances was recommended to MOH in the report.

In the terminal evaluation report, the result of the questionnaire survey for NEC teachers, MOH staff and chief nurses in model hospitals showed an interest in CON among staff working at hospitals, students and MC teachers, which was reflected in answers describing desired nursing as “high quality care which meets each patient’s needs, good communication, clear explanation, gentle consideration, easing anxiety, explanation

⁸ Teachers in MCs of Uzbekistan must be university graduates. At the time of project planning, it was common for doctors to become teachers of MCs since very few nurses met the requirements. Under current circumstances, nursing departments have been set up at several medical universities and there is an increasing trend for teachers with nursing education to become qualified as teachers in MCs.

to family”. Since this was the first attempt to introduce CON-based nursing education in Uzbekistan, retraining of teachers in MCs as venues for nursing education was clearly essential to disseminate this new nursing education to all MCs in Uzbekistan. Accordingly, the needs to retrain teachers in MCs, and develop environmental arrangement remained high at the time of project completion.

3.1.3 Relevance to Japan’s ODA Policy

In the JICA country operation plan for Uzbekistan at the time of project planning, reforming medical and education service was one of three priority pillars. Among them, “fostering and strengthening the role of nurses” was focused on as a priority assistance area for preventive care and dissemination of the concept and PHC service. Hence, the Project, focusing on retraining teachers of MCs, was consistent with Japanese ODA policy.

As mentioned above, this project has been highly relevant with the Uzbekistan’s development plan, development needs, as well as Japan’s ODA policy, therefore its relevance is high.

3.2 Effectiveness and Impact⁹ (Rating: ③)

3.2.1 Effectiveness

Through the project activities, nursing education was revised by introducing a new “CON” concept in Uzbekistan, where nursing education was originally conducted basically for doctors. In particular, the curriculum, which was originally formed by specialties such as internal medicine, surgery, dermatology, etc., was revised to a new curriculum on seven nursing subjects¹⁰ based on each stages of each patient. Accordingly, the curriculum was revised to teach the knowledge and techniques to provide nursing based on the CON concept, whereupon teaching guidelines and nursing practice guidelines were also revised in line with the new curriculum to introduce revised nursing education in MCs. In terms of effectiveness, the achievement of the outputs and project purposes, and contribution of outputs in achieving the project purpose upon project completion were usually analyzed. In this ex-post evaluation, however, it is necessary to analyze the effectiveness from the institutional side to ascertain whether the new revised nursing education model has been established after introducing the new concept through

⁹ Sub-rating for Effectiveness is to be put with consideration of Impact.

¹⁰ 1. Fundamental nursing, 2. Maternal health nursing, 3. Child health nursing, 4. Adult health nursing, 5. Gerontological nursing, 6. Psychiatric nursing including Mental health nursing, 7. Community health nursing. Among these seven subjects, Gerontological nursing, Psychiatric nursing and Community health nursing were newly introduced in Uzbekistan.

the project. Therefore, to verify the current institutional situation, some of the verified indicators to output and project purpose at the time of the ex-post evaluation were also examined as well as reviewing the current situation at the time of project completion.

3.2.1.1 Project Output

Output 1

Concept of CON is introduced into in-school education at FRMC.

At the time of planning, the original indicator was set as a CON concept introduced into in-school education, but divided into three outputs 1-1, 1-2 and 1-3 to clarify the contents. Accordingly verified indicators were also newly set up respectively.

Output 1-1 Teaching plan and teaching program¹¹ based on CON for FRMC are approved by MOH and MOHSSE.

[Indicator 1] Authorized person of MOH and MOHSSE sign to approve the draft Teaching Plan by September 2006.

[Indicator] Authorized person of MOH sign to approve the draft Teaching Program based on CON for the FRMC by September 2008.

Both the teaching plan and teaching program by seven nursing subjects were prepared during the project and approved in 2006 by MOH and 2007 by MOHSSE respectively. Accordingly, the ex-post evaluation confirmed that output 1-1 had been achieved, although it was slightly delayed. The teaching plan and teaching program as project outputs were developed by Japanese Experts, Counterpart (hereinafter referred to as “C/P”) of the Uzbekistan side and a member of each Working Group, which comprised teachers from MC, NEC, etc. Under current circumstances, these project outputs, namely the teaching plan and teaching program, are the basis of nursing education introduced at all MCs in Uzbekistan. Therefore, developing the teaching plan and teaching program helped establish an educational model based on CON in the country.

Output 1-2 Teaching guidelines¹² for 7 subjects are prepared based on CON.

[Indicator] Teaching guidelines are accredited through the third party by March 2009.

Under the project, teaching guidelines and nursing practice guidelines of seven subjects

¹¹ In the course of project implementation, some concepts were shared among all stakeholders. The curriculum was translated into a teaching plan (time schedule) and teaching program. The teaching plan specifies the subjects and number of classes required for graduation, while the teaching program shows details of the syllabuses.

¹² The concept of the teaching material is also shared among stakeholders and translated into teaching guidelines and nursing practice guidelines respectively.

were newly prepared as part of the arrangement required to introduce a revised nursing education based on the CON concept in Uzbekistan. Teaching materials were also developed by Working Group of each subject, whereupon teaching guidelines and nursing practice guidelines for all seven subjects were translated into both English and Russian in October 2008. Subsequently, all outputs were carefully re-examined by Japanese experts and approved by MOH and MOHSSE in April 2009. Although slightly behind schedule, output 1-2 was therefore also achieved.

After the project completion, MOH distributed teaching materials and teaching guidelines to all MCs, nursing departments of universities and related institutions to facilitate understanding of nursing education based on the CON concept. Subsequently, MOH revised the curriculums to increase the proportion of practical lessons, followed by teaching guidelines in 2011.

Output 1-3 Teaching method of CON is understood by the nursing teachers.

[Indicator]80% of C/P, staff, teachers of nursing practice teaching and retraining members of FRMC pass the comprehension test on the teaching guideline by March 2009.

The nursing education method based on the CON concept was firstly instructed to C/Ps, NEC teachers who will provide retraining courses and nursing teachers at FRMC, which is the model MC of the project. Subsequently, all C/Ps and teachers who learned nursing education based on CON took the comprehension test on April 10, 2009 and 82% received a pass mark. Output 3 was also therefore achieved, although slightly behind schedule.

Even after the project completion, NEC¹³ continued providing retraining courses for nursing teachers of MCs by province. 2,904¹⁴ nursing MC teachers had received retraining courses by the end of 2012 and NEC keeps monitoring the level of understanding among

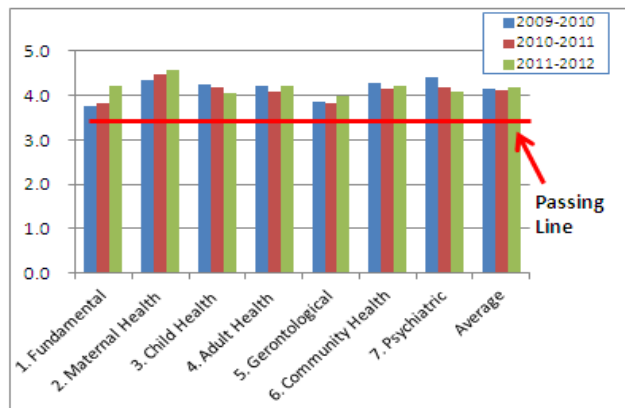


Figure 1 Comprehension test result for MC teachers

Source: Prepared by the Evaluation Team based on documents provided by NEC.

¹³ After the project was completed, “Nursing Education Centers” (NECs) were renamed “Nursing Teachers Upgrading Centers”. In this report, both “Nursing Education Center” and “Nursing Teachers Upgrading Center” are described as “NEC”.

¹⁴ This figure is equivalent to 90% of all teachers in charge of nursing education.

nursing teachers by conducting comprehension tests after the retraining courses. The test conducted during the project was paper style, however, an observation test during practical lessons and an interview are now added to the comprehension test. During these years, all teachers passed the tests, which were conducted by the end of 2012, by obtaining a mark of around 4 points, with the average pass mark exceeding 3 points out of 5, as shown in Figure 1.

Output 2 CON practice teaching is introduced in the model hospital. .
[Indicator]The minimum requirements of CON practice are fulfilled in the clinical practices at model hospital and FRMC's practice hospitals by June 2009.

Before the CON concept was introduced, very few classes were taken for clinical practices nursing, so prior training by utilizing nursing practice guidelines was held to introduce the new clinical practice lessons. In addition, the project stipulated four minimum requirements¹⁵ for conducting clinical practice lessons at model hospitals, which were then set as verifiable indicators to be achieved for output 2. Each requirement and the status of achievement on project completion are shown as below.

Table 1 Requirements for Clinical Practice Classes and the Status of Achievement

	Requirements	Status of Achievement
1.	Health facilities assign suitable nurses for 80% of students in clinical practice when practicing commences.	A contract letter was exchanged between MCs and hospitals, which specifies the nurses assigned for students. 100% achieved as nurses were assigned to all students for clinical practices.
2.	To prepare patients who will be attached to 80% of students when practicing commences.	Though some cases involved two or three students taking care of a patient, all students were attached to patients for clinical practice.
3.	80% of students can obtain information from patients' records within the first 2 days of the practice period.	According to the survey conducted by Japanese experts, 98.7% of students obtained information within the first 2 days of the practice period.
4.	80% of conferences with head nurses are conducted.	Only 5 out of 363 conferences were conducted without head nurses.

Source: Prepared by the evaluator based on the "Experts Completion Report" of the project

These four criteria were selected to meet the minimum CON concept requirements. MC and hospitals for clinical practices have exchanged contracts which clarify that these four requirements must be met. In addition, it was confirmed by interviewing hospital

¹⁵ At the start of the project, these minimum requirements for clinical practices were not imposed given the lack of experience in conducting CON-based clinical practices in Uzbekistan at that time. There was therefore a need to examine criteria which would be the basis for clinical practices in the country. When introducing clinical practices, the project examined the necessary requirements based on actual circumstances on the ground and finally set four minimum requirements.

teachers of for clinical practices that these minimum requirements were appropriately implemented. Therefore, output 2 has been achieved as shown in table 1. As mentioned, setting clear requirements and then specifying them in the contract made it easier to introduce CON-based clinical practices to hospitals. According to leading nurses for clinical practices, they monitored how students treated patients and advised them if needed, although this was not included in the minimum requirement.

Output 3 Standard of nursing education (teaching plan and teaching program) is proposed.

[Indicator] MOH accepts the proposal prepared by the projects by June 2009.

Under this project, the teaching plan and teaching program were revised and it was proposed that this revised CON-based nursing education would be the nursing education standard in Uzbekistan. MOH and MOHSSE accepted this new nursing education standard in April and June 2009 respectively, meaning output 3 has also been achieved.

As mentioned in “Relevance”, promoting CON-based nursing education was consistent with President Decree No. 3923 and reflected the same direction as adopted by MOH. This consistency strongly encouraged the dissemination of this new standard of nursing education nationwide with the strong initiative of MOH without any institutional impediments. MOH initially planned to introduce CON-based nursing education in stages, but it was actually started at all MCs nationwide the following year, in 2010. Furthermore, it was confirmed that NEC, which was established at the start of the project, would exist as a retraining education center, and that members of C/P would be used as NEC teachers.

3.2.1.2 Achievement of Project Objectives

Project Objective An educational model based on CON is established.

[Indicator] 70% of graduates of FRMC in 2009 pass a comprehension test on CON.

This project aimed to improve understanding of the CON concept by introducing CON-based nursing education to FRMC first as a model MC. At the time of terminal evaluation, a test on CON concept for students at FRMC was conducted to determine the comprehension level. Consequently, only 25.3% of them gained over 60%. At that time, it was expected that the test or understanding level would improve by the project completion, considering that students were unfamiliar with the paper-based method and the questionnaire survey was implemented without any advance notice. However, only 25% of students obtained the passing rate for the comprehension test on project completion in 2009, which was lower than the target score. Conversely, it was clarified that the indicator, 70% of FRMC graduates passing a CON comprehension test in 2009,

was not shared among stakeholders in an interview survey conducted during the ex-post evaluation. In addition, it remained unclear why the target score was set at 70%, despite our interview survey. Furthermore, stakeholders including the FRMC teachers and NEC and MOH staff questioned the validity of this indicator, since they insisted that “the comprehension level of students should be scaled not only by the result of a paper test but also by qualitative aspects through observation by nursing teachers at clinical practices” and “some time will be needed until the new nursing education reflects students’ understanding and the test result.”

In addition, it was confirmed that 60% of respondent (students) answered that nursing means “independent tasks as a nurse” after they had experienced clinical practices for all seven subjects in a questionnaire survey on CON, which was conducted simultaneously with a comprehension test. On the other hand, 60% of them responded answered that nursing means “the subsidiary role of doctors” after they took only two subjects (fundamental nursing and adult health nursing) based on revised nursing education as shown in Figure 2.. Referring to this result, the perception of students toward nursing and comprehension of the CON concept are considered to have improved. In MCs, a unified examination is conducted on

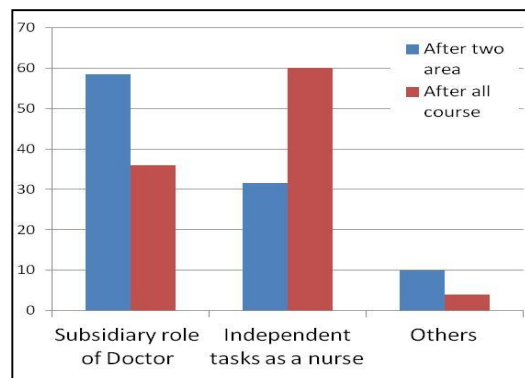


Figure 2 Result of comprehension test on CON
Source: Project completion report.

graduation, which included subjects related to CON education¹⁶. As to the test score for the past three years, the average for subjects related to CON education has improved to over four of a possible five¹⁷ as shown in table 2. According to MC teachers and MOH staff, this is due to enhanced comprehension among MC teachers given greater experience in teaching CON education with the improved teaching methods.

Table 2 Test Result of students on CON Subjects at FRMC after the Project Completion

2009-2010	2010-2011	2011-2012
4.09	4.24	4.30

Source: Documents provided by FRMC

As mentioned above, students’ comprehension deepened thanks to the output produced by the project, despite some minor concerns over sharing information among project-related people, and the setting and appropriateness of indicators. This project is

¹⁶ Subjects related to CON education mean seven nursing subjects, namely Fundamental nursing, Maternal health nursing, Child health nursing, Adult health nursing, Gerontological nursing, Psychiatric nursing including Mental health nursing and Community health nursing.

¹⁷ The test result was scored from one to five. The pass score was three and above.

thus considered to have achieved its objectives and its effectiveness is high.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

Overall Goal	Nursing education, based on CON is innovated in MC throughout the country.
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[Indicator]	100% of MCs starts the education based on CON by 2012.
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Initially, MOH intended to disseminate CON-based nursing education to MCs nationwide step by step¹⁸. However, MOH invited Directors of all MCs and held a seminar on CON education in 2009. Afterwards, CON education was introduced to 33 of 78 MCs the same year and to the remaining MCs the following year, with new curriculum introduced and MC's facilities renovated earlier than planned in the indicator. In Uzbekistan, the promotion of CON-based nursing education was recognized as part of the "National Program of Reforming the Healthcare System". Accordingly, this program pushed MOH to introduce a new curriculum and develop facilities and teaching materials to disseminate CON education in 2010. These arrangement was planned done by 2012 originally, however, initiative of MOH was able to accelerate the schedule. Furthermore, NEC has now conducted retraining on CON education for nursing teachers in all MCs, and 90% of nursing teachers have taken a retraining program¹⁹. Each MC implements CON-based nursing education in line with the teaching guidelines and under MOH guidance at the time of the ex-post evaluation. In the ex-post evaluation, the lack of any critical problems in terms of teacher's sufficiency was not confirmed through an interview survey at visited MCs.

In Uzbekistan, if the government deems any issues as important, activities are swiftly executed. Since the project purpose matched the direction of national health reform in Uzbekistan, MOH, as the executing agency, recognized the importance of revised nursing education and this consistency enabled to the CON-based nursing education to be disseminated nationwide earlier than planned.

3.2.2.2 Other Impact

(1) Enhanced CON awareness and comprehension among doctors and nurses

Under the project, seminars for healthcare professionals were held in addition to those

¹⁸ Based on the initial schedule, it was planned to start by disseminating CON education in Tashkent city, followed by Tashkent Province and core MCs and finally all MCs in Uzbekistan.

¹⁹ The reason why around 90% of teachers took the retraining program was that about 5% of MC teachers left and returned due to maternity leave or nursing care of family members every year on average. There is thought to be a need to continue the retraining program for these teachers in the future.

for MC teachers. These seminars, new nursing concept and seven CON-based subjects were introduced, featuring the participation of approximately 2,000 people, including observers. As well as MC teachers, doctors and nurses of hospitals in Uzbekistan also became interested in the CON concept through these seminars. The result of a beneficiary survey²⁰ conducted at this ex-post evaluation also showed that the 96% of doctors and nurses who responded stated that understanding of CON had improved among doctors and nurses at hospitals for practice nursing. This enhancement of concerns and comprehension also pushed the promotion of CON introduction in line with the direction of nursing education in Uzbekistan. Also when asking the same respondents about “nursing works” in the beneficiary survey, there were some changes in perception from the “subsidiary role of doctors” to “independent tasks or nurses” or “support of patients and families” as shown in Table 3. This result shows that as well as nursing teachers and students of MC, as direct project beneficiaries, doctors and nurses have also enhanced their understanding of nursing based on CON.

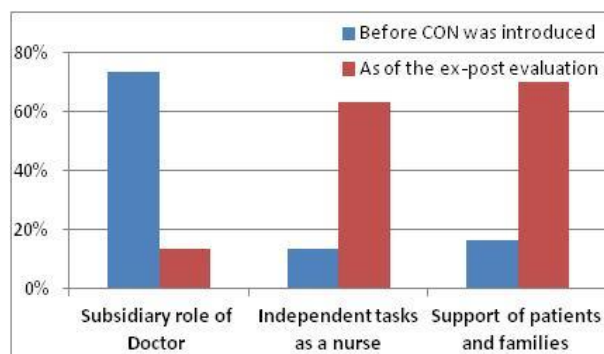


Figure 3 Perception of Nursing Works (Result of the Beneficiary Survey)

In addition, more than 70% of respondents replied that they had some difficulties in conducting practice nursing because MC teachers failed to fully understand the concept at the beginning of the project, but there were no issues or concerns under current circumstances because MC graduates or teachers increased their experiences (Please refer to Figure 4). According to respondents, understanding of CON has been enhanced over time and experience, even after project completion, which further spurred confidence to conduct CON-based nursing education.

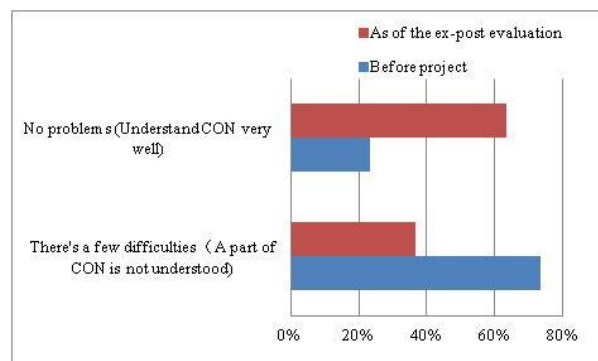


Figure 4 Implementation of CON-based Nursing Education (Beneficiary Survey result)

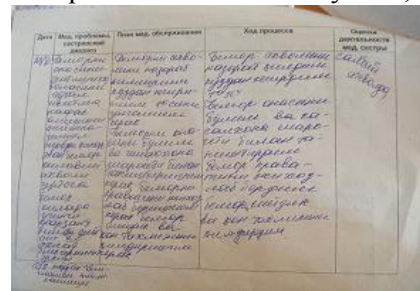
(2) Changes caused by the implementation of the CON-based nursing education

²⁰ In the ex-post evaluation, a beneficiary survey was conducted to capture the effect of the implementation of CON-based nursing education and changes before and after the project. The respondents were 96 MC teachers or staff and nurses at hospitals for practice nursing.

An interview survey conducted at MOH, MC and hospitals for practice nursing showed that various changes were confirmed at all MCs and hospitals by implementing CON-based nursing education of MC teachers and students as well as nurses in hospitals for practice nursing. In addition, the result of the beneficiary survey also indicated that 97% of respondents thought the quality of nursing works at hospitals for practice nursing had increased through project activities. The major changes are explained as follows:

【Improved status of nursing works】

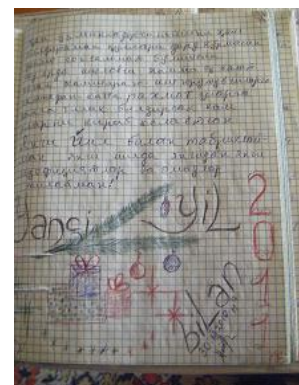
Students for practice nursing and some nurses in practice nursing hospitals have started acting independently compared to before since they engaged in nursing more positively, rather than doing subsidiary works on behalf of doctors. For example, a nursing record was started being kept for each patient in major hospitals in Tashkent city, which had never previously been done. Under these circumstances, students and nurses who learned nursing education with the new curriculum experienced the new system, whereby a nurse was assigned to each patient. It is thought that both experiences prompted them to strive to improve care for patients. As such, assigning these responsibilities helped encourage their pride in the work they did as nurse. In addition, some doctors also started to accept the new role of nurses, which helped boost their social status.



(Photo) Nursing record

【Increase of dialogues and development of a trusting relationship with patients】

Before the project implementation, it was very rare for nurses to communicate with patients. Conversely, revised nursing education was based on the CON concept, which means “client- (patient-) oriented nursing” and “providing nursing and life support based on the needs of each patient’s life cycle stage”. Thus, under this concept, practical nursing guidance on how to treat patients and provide meal assistance as well as attention to hygiene, etc. are also included, which boosts efforts to increase dialog and develop trusting relationships between patients and nurses as impact of the project. There are sign books for patients to comment on services in each hospital and recently, words of appreciation for caring are often written, which were never previously seen before the introduction of the CON concept. This writing can thus be said to reflect changes between patients and nurses.



(Photo) Words of appreciation from patients to nurses

【Improved family support for patients】

According to the results of a beneficiary survey, 98% of respondents answered that the introduction of the CON concept had helped improve family support for patients. In Uzbekistan, it is culturally common for family members to take care of patients in hospitals. In CON-based nursing education, nurses guide family members on how to administer personal care, including meal assistance or changing sheets, which helps improve the care given by families to patients.

As mentioned, this project introduced a new concept, CON. Through the project activities at the model college, the project purpose, namely to establish a model for new CON-based nursing education, was mostly achieved. Upon project completion, a revised curriculum based on nursing education around the CON concept was introduced as Uzbekistan's new nursing education system through a strong MOH initiative. At the time of the ex-post evaluation, it was confirmed the revised nursing education had been actually conducted at MCs in Uzbekistan, and that the overall goal was achieved for its target indicators, therefore its effectiveness and impact is high.

3.3 Efficiency (Rating: ②)

3.3.1 Inputs

Planned and actual inputs for the project are shown in Table 3.

Table 3 Plan and Actual Inputs

Inputs	Plan	Actual Performance (As of terminal evaluation)
Japanese Side		
1. Experts	• Long term expert: 15 • Short term experts: 50	• Long term expert: 5 • Short term experts: 103
2. Trainees received	25 trainees	39 trainees (Training in Japan)
3. Equipment	16 million yen (Equipment for audio-visual, material preparation, printing, etc.)	27.5 million yen (Equipment for audio-visual, material preparation, printing, etc.)
4. Local cost	36 million yen	57.7 million yen
Project total cost	390 million yen	590 million yen
Uzbekistan Side		
1. C/P personnel	Not stated	6 C/Ps
2. Land and facilities	Office for JICA experts with utilities	36 million yen (Renovation of NEC)
3. Others	Not Stated	20,213,000 sum (NEC operation cost)

Source: Terminal evaluation report.

3.3.1.1 Elements of Inputs

(1) Japanese Side

【Dispatch of experts】

Long term experts: Chief advisor, Nursing education, Coordinator

Short term experts: Project management, Training supervisor, Fundamental nursing, adult health and gerontological nursing, Maternal and child health nursing, Maternal nursing, Child health nursing, Psychiatric nursing and Community health nursing

As shown in Table 3, over 100 short-term experts were dispatched during the project implementation. This is because revising the teaching program and teaching materials for all seven subjects as well as retraining the teachers required the involvement of this many short term experts. The Uzbekistan side also admitted that the purpose of introducing the new CON concept would not have been realized without this many experts and their various areas of expertise. While the needs were confirmed, certain factors, namely the lack of long term experts²¹ to coordinate numerous short term experts and difficulty in sharing information among project-related people were confirmed. These circumstances led to a situation whereby the project purpose was not recognized by C/Ps and some Japanese experts. Accordingly, it can be said that these factors partly impede the efficiency of project implementation.

【Trainees received】

39 nursing educators and administrative officials took the training courses for “nursing educators²²” or “nursing management²³” in Japan. According to the interview survey for the trainees, the opportunities to expose how nurses cared for patients and nursing practices in hospitals in Japan were new and exciting experiences, which also triggered increased interests in CON²⁴. Administrative officials also stated how these experiences have helped boost commitment for disseminating CON across countries and retaining the project sustainability.

【Equipment and local cost】

Audio-visual equipment for training, equipment for preparing teaching materials and

²¹ Under this project, the duration of each stay of short term experts was about one week on average. At the latter part of the project, short term experts who relatively stayed longer (about a half of year) also dispatched due to the large amount of duties.

²² The course provided mainly practical training based on the CON concept or CON-based nursing education.

²³ The course was for training in nursing management.

²⁴ Training was conducted at academic institutions, hospitals, institutions for elderly people, healthcare centers, home-visit nursing stations and working facilities for psychotic patients and so on.

printing and medical equipment for demonstrations needed for nursing practice were procured to NEC, FRMC and Center of Emergency Medical Care, which were the model hospitals in this project. The scope of local cost included the operating cost of training, while each input was admitted to produce each output. However, a lack of translators and interpreters impeded the smooth implementation of the project and required additional input at an early stage. Later, interpreters and translators gradually enhanced their capacities with the guidance of Japanese experts and efforts, including accompanying training to Japan. Conversely, the importance of interpreters and translators had to be appropriately taken into account at the planning stage with the nature of the project in mind.

(2) Uzbekistan Side

【Counterpart assignment】

Six counterpart personnel were assigned and joined the project activities from MOH and MC. These six C/Ps were assigned to Working Groups in each subject to revise the curriculum²⁵.

【Land and facilities】

As originally planned, part of the building in FRMC located in Tashkent city was renovated and provided to NEC as the main venue for the project activities.

【NEC operation cost】

The total of 20,213,000 sum²⁶ was paid as the NEC operation cost to retrain MC teachers.

3.3.1.2 Project Cost

The planned cost of the Japanese side totaled 390 million yen, but the actual total project cost was 590 million yen, namely higher than planned (150%). One of the reasons was the need for frequent travel, due to special circumstances whereby numerous short term experts in all seven nursing subjects were involved. In addition, costs exceeding the forecast level were also incurred with additional translation cost.

3.3.1.3 Period of Cooperation

The actual cooperation period was 60 months as planned. During the early stages of

²⁵ There were 6 C/P personnel since a C/P was in charge of two subjects.

²⁶ It included the cost for salaries and operation cost at the time of the terminal evaluation (as of December, 2008 at exchange rate of 1sum=0.066 Japanese yen.)

the project, there was some delay due to a lack of understanding of the importance and the appropriate number of translators and interpreters. However, additional input for translators was made and efforts made to enhance their capacity, whereupon activities could subsequently be conducted as planned.

As described above, although the cooperation period was within the planned scope, the project cost exceeded the forecasts due to the frequent dispatch of short term experts and additional input of interpreters and translators, therefore the efficiency of the project is fair.

3.4 Sustainability (Rating: ③)

3.4.1 Related Policy towards the Project

Since there was no integrated national socioeconomic development plan in Uzbekistan even at the time of the ex-post evaluation, a sectoral development plan is counted. In the health sector, “On measures to further deepen the healthcare reform for 2012-2015” which was formulated in 2011 presented the continuation of the “National Health Reform Program”. A Presidential Decree²⁷, which was issued in 2012, also mentioned that a further improvement of training/retraining for professional college teachers, including MCs, would be made. In addition, the CON-based nursing education concept has currently penetrated among MCs nationwide. Accordingly, the sustainability of the output whereby the nursing education model is established under the project is high in terms of related policy aspects.

Furthermore, Presidential Decree No. 3923 (refer to 3.1 Relevance for the details) was valid as of the ex-post evaluation, as with the ex-ante and terminal evaluation and continuation of the National Health Reform Program and the importance of education for medical personnel was maintained.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

【The operational role of CON-based nursing education】

Various institutions, including MOH, MOHSSE, NEC, etc., were involved in this project. Even upon project completion, each of the institutions adopted the role of disseminating the CON-based nursing education nationwide and promoting its effects as shown in Table 4. In addition, MOH provided the necessary support by issuing an official letter to each provincial health office when NEC conducted retraining programs, etc. Coordination among each institution was also adequate. There were therefore no major issues concerning institutional and operational aspects under current circumstances.

²⁷ Presidential Decree No. 1761, issued on May 28, 2012.

Table 4 The Role of Each Institution on Operating CON-based nursing education

	Role
MOH	Introduction of New Curriculum, support for retraining operations
MOHSSE	Support for the introduction of a new curriculum, approving the revision of programs and teaching materials, securing the quality of education
NEC	Retraining of MC teachers
MC	Introduction and implementation of CON education

Source: Prepared based on an Interview Survey.

【Positioning of NEC】

After completing the project, NEC conducted a retraining program for nursing teachers of MC to implement the new nursing education in all MCs nationwide. Under current circumstances, the Director, who currently serves as FRMC director, and three staff members, are assigned in NEC. Since one staff member who used to be a C/P of the project resigned, one teacher for one nursing subject of seven was dispatched from the Tashkent Medical Institute for a CON education retraining program. In addition, FRMC also provided the necessary support for conducting the retraining program, as required. NEC staff have conducted a retraining program for each block by provinces in sequence supported by the Tashkent Medical Institute and FRMC. The retraining program thus proceeded without any serious issues such as shortage of staff numbers.

By project completion, NEC planned to conduct a retraining program based on the CON concept for nursing teachers of all MCs. This plan was already achieved in 2012 by conducting the program for MCs in all provinces. Subsequently, the Ministry of Finance (hereinafter referred to as “MOF”) did not allocate the budget to NEC in 2013 because the difference in function between the upgrading center in Tashkent Medical Academy and NEC was unclear. Meanwhile, the MOH insisted on the need for the continuing existence of NEC because NEC has an important role in retraining returners and revising the curriculum for the future (Please refer to 3.4.4 regarding detailed information on budgetary issues.) The role and position of NEC upon project completion had to be clarified at the time of planning or during project implementation, since it was assumed that a retraining program for all MCs would be completed within a certain period.

3.4.3 Technical Aspects of the Implementing Agency

The technical capacity to conduct retraining of nursing education was maintained, as C/Ps of the project were assigned as NEC staff upon project completion. In addition, by conducting classes repeatedly, NEC staff and MC teachers increased their confidence, while some Japanese experts also visited Uzbekistan upon project completion to follow their activities, utilizing university research funds. These efforts also supported their

attempts to enhance their technical capacity. The knowledge and experience gained from this project have thus been fully utilized and there are no serious issues over technical aspects in terms of planning and operating the retraining program. Upon project completion, MC teachers prepared textbooks on the seven subjects for students, meaning the MC teachers involved in this project C/P are considered to have acquired sufficient capacity.



(photo) Textbook for students prepared by MC teachers after the project completion

Conversely, medical equipment required for nursing practice in the revised curriculum was lacking. To ensure sustainability, the situation would need to be improved, since 24 of a total of 78 MCs²⁸ had the most basic medical equipment, despite the fact classrooms required for nursing practices in seven nursing subjects had already been installed into all MCs. The situation is now expected to improve because funding for installing facilities and equipment to professional colleges was announced by Presidential Decree²⁹ in 2011. In addition, medical equipment valued at 15 million yen was procured as a follow-up project with JICA support in 2012, and MOH plans to install medical equipment in 8 of 24 MCs in 2013.

3.4.4 Financial Aspects of the Implementing Agency

CON-based nursing education, whose attempts were made to deploy in this project, has been disseminated to all MCs nationwide and now actually implemented. Before dissemination, the required medical equipment and facilities were developed and a retraining program for MC teachers was conducted, meaning basically no additional budget will be needed to continue nursing education in the future. The MOH budget has shown a tendency to increase, as shown in Table 5, and MOH staff also mentioned that a certain degree of sustainability in financial terms to continue CON-based nursing education had been secured at this time.

Table 5 Budget of MOH
(Unit: billion Sum)

2010	1,704 (81,461)
2011	2,232 (106,715)
2012	2,820 (134,818)

Note : () shows in Japanese yen in million yen
Source: Documents provided MOH

One concern for the future has to be highlighted, that is, securing the NEC budget, when NEC needs to be restarted the retraining program. Up to 2012, from the time when the project started, the NEC budget for the retraining program was allocated from MOF.

²⁸ At the time of project commencement (2004), there were 54 MCs in Uzbekistan. However, the figure increased to 78 at the time of project completion (2009) in response to the population surge at the age of 15. Since the procurement of medical equipment started for the original 54 MCs, minimum equipment was procured for the remaining 24 MCs.

²⁹ Presidential Decree No. 1645 (2011)

However, since the retraining program was conducted for nursing teachers in almost all MCs in 2012, the MOF did not allocate a budget in 2013. The MOF explained that this was because the retraining function could be found at the upgrading center at Tashkent Medical Institute, eliminating the need for an NEC budget. However, according to MOH, it is difficult to conduct CON-based nursing education in this center, since the program offered by the Institute is mainly theory and methodology, and there is no facility for CON-based nursing education there. Although an official letter was issued to MOF from MOH to highlight the importance of NEC's role and function, there is no response for future allocation to NEC, even if there is a need to restart the retraining program. The average annual NEC budget over the past three years was 1.7 million yen, therefore, MOH is considering countermeasures, even if MOF does not allocate the budget when the retraining program has to be restarted, for example securing the NEC budget with the MOH budget, or integrating the function of NEC within the upgrading center.

As mentioned, no major problems were observed in terms of the policy background, or the structural, technical or financial aspects of the executing agency, hence the sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was conducted to establish a new nursing education model based on the concept of "Client-Oriented Nursing" (CON) in Uzbekistan. The project direction was consistent with Uzbekistan's strategy, which emphasizes reforming the healthcare system, and Japanese assistance policy, which prioritized reconstruction of the healthcare system and medical personnel education. It also met the needs to enhance the quality of medical workers in Uzbekistan, hence the relevance is high. The project introduced new nursing education via the model MC, by modifying the curriculum and teaching material, and developing facilities and medical equipment to disseminate the CON concept. The nursing education model based on the CON concept has been introduced at all MCs in Uzbekistan at the time of the ex-post evaluation, therefore its effectiveness and impact are both high. The efficiency of this project is moderate since more input than planned was required as the cost to improve understanding of the new CON concept exceeded the original estimate. Its sustainability is considered high, because new nursing education has been disseminated and implemented steadily at all MCs nationwide, despite minor concern over the future role of NEC, which has responsibility for retraining MC teachers.

In light of the above, this project is evaluated as highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

【Installation of sufficient medical equipment in MCs】

Revised CON-based nursing education was conducted in MCs nationwide. However, only minimum medical equipment to conduct CON-based nursing education was provided in rural areas. In a revised nursing education curriculum, since more time is dedicated to practical nursing lessons, a lack of medical equipment could prevent students from improving their understanding. Therefore, there is a need to install appropriate medical equipment to conduct practical lessons in all MCs, including the option to obtain overseas funding if impossible to secure the budget in Uzbekistan.

4.2.2 Recommendations to Implementing Agency and JICA

【Securing the NEC budget】

No budget for the operation of NEC was allocated from MOF in 2012. MOF explained that this was because a retraining program for CON education had been conducted for MCs nationwide and compartmentalization between the upgrading center in the Tashkent Medical Institute and NEC was also unclear. Conversely, the importance of the continuing existence of NEC was stressed by MOH for MC teachers to catch up to the revised curriculum in future on a regular basis and engage in retraining retirees. In this regard, MOH is required to confirm the significance of the existence and scope of their role and demonstrate the same to MOF and related institutions. Actually the same issue on budget allocation emerged in 2009. Accordingly, JICA sent a letter to obtain cooperation of MOF, which then reconsidered the budget allocation at that time. It may therefore be effective that JICA offers support on this financial matter by issuing a letter which would appeal to MOF.

4.3 Lessons Learned

4.3.1 Lessons Learned to JICA

【Appropriate plan for input of translators and interpreters】

At the beginning of the project, the smooth implementation of activities was affected by a lack of translators and interpreters. In Uzbekistan, CON was a new concept and the project undertook an important role, targeting an improved nursing education system based on this new nationwide concept. Under such circumstances, the importance of a translator who express the concept accurately was not recognized, hence an appropriate amount of input was not made. For similar projects, appropriate input should be ensured by thoroughly examining the project purpose and its process to achieve it with project features at the planning stage.

【Planning for support considering upon project completion】

As of the ex-post evaluation, the role of future activities, positioning and financial resources of NEC remained unclear. According to MOH and related people, the future need for the retraining program is high for MC teachers to respond to and improve the curriculum in future on a regular basis, and provide training for returners having once retired for maternity leave or family care. Thus, a clear idea of the future sustainability of main institutions for continuing activities must be established and confirmed at the planning stage or during the project implementation.

【Coordination and information sharing among project-related persons】

A verifiable indicator was modified in the course of the project. However, it was confirmed at the ex-post evaluation that the modified parts and indicators had not been fully shared among stakeholders. This was because of difficulties in ensuring sufficient coordination due to a lack of key players, although many experts were involved in the short term. For similar projects in future, it is recommended to assign long term experts capable of coordinating all stakeholders or persons as central figures of the project. This will make it possible to establish the system to share information more easily among all stakeholders.

(End)