

Country Name	The project for strengthening pedagogical and technical skills of teachers of health training institute
Republic of Mozambique	

I. Project Outline

Background	In Mozambique, there was a critical shortage in human resources in the health sector due to the Civil War that finally ended in 1992. The Ministry of Health (MOH) addressed building 750 new health centers, county hospitals, and general hospitals by 2025 in order to improve access to health services. The resulting demand-supply gap for the workforce in the health sector was deemed to widen further. As such, MOH formulated the "National Plan for Health and Human Resources Development" (2008-2015) to achieve the augmentation of human resources in the sector and proceeded with the specific training plan. On the other hand, regarding the quality of education in terms of the health sector, challenging issues emerged such as inconsistency of contents among a curriculum of different specialized courses as well as teaching methods. Therefore, there was a pressing need for the introduction of mechanisms that ensured and improved the quality of education, such as the detailed examination of guidance provided to each training institution, reinforcement of the standardized functions as well as teachers’ capacity with pedagogical methodology.		
Objectives of the Project	Through standardization of curricula for technical courses of 6 priority areas, enhancement of the capacity for teachers at the Health Training Institutes (HTI), and establishment of the quality management system, the project aimed at promoting the training of human resources for the provision of proper healthcare service, thereby contributing to nurturing quality health personnel at the Health Training Institutes in Mozambique. 1. Overall Goal: Quality health personnel are nurtured at the Health Training Institutes. 2. Project Purpose: Promote the training of human resources for Health at the Health Training institutions sustainably (priority areas: medical technician, preventive medicine & environmental sanitation (TMPSM), nursing, Maternal and child health (MCH) nursing, pharmacy technician, and laboratory technician) for provision of proper healthcare service.		
Activities of the Project	1. Project site: whole country of Mozambique 2. Main activities: (1) standardization of curricula for six priority technical courses, (2) enhancement of the capacity for the full-time teachers at the Health Training Institutes, (3) establishment of quality management system for full-time teachers. 3. Inputs (to carry out the above activities) Japanese Side 1) Experts: 67 persons 2) Trainees received: 35 persons 3) Third-country training: 15 persons (Brazil) 4) Equipment: photocopy machine, printer, PCs, video camera, etc. Mozambique Side 1) Staff allocated: 25 persons 2) Facilities: Office for the experts and training rooms 3) Local cost: Administrative and operational expenses		
Project Period	(ex-ante) January 2011 – January 2016 (actual) January 2011 – December 2015	Project Cost	(ex-ante) 393 million yen, (actual) 327 million yen
Implementing Agency	Ministry of Health (MOH), the National Directorate for Training of Health Professionals (DNFPS: Direcção Nacional de Formação de Profissionais de Saúde) (The Directorate of Human Resource and the Department of Training were reorganized into the DNFPS in 2018)		
Cooperation Agency in Japan	Nagasaki University		

II. Result of the Evaluation

<Constraints on Evaluation>

Due to travel restrictions and lockdown measures raised during the COVID-19 Pandemic, data gathered in the rural areas during the ex-post evaluation was lower both in quantity and quality as on-site data collection and direct observation were not as feasible as planned. Nonetheless, mitigation measures were taken as follows; 1) rely more on existing monitoring data collected prior to COVID-19, 2) increase scope of desk-based review of administrative data, 3) use of remote data collection and analysis methods where available.

1 Relevance
<p><Consistency with the Development Policy of Mozambique at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the development policies of Mozambique at the time of ex-ante evaluation. The MOH formulated the "National Plan for Health and Human Resources Development (NPHHRD)" (2008-2015) to improve access to health care services and to increase the number of full-time human resources for health from 25,683 in 2006 to 45,654 in 2015. Based on the roadmap of the plan, new and enhanced Health Training Institutions in the health sector were to be established to expand the human resources in the sector. In addition, considering that the capacity of human resources in the sector is directly related to the quality of health services, the National Poverty Reduction Action Plan (PARP) set strategic goals such as improving the management of human resources for health (quality improvement of human resources for health) in order to provide quality care to meet the needs of patients.</p> <p><Consistency with the Development Needs of Mozambique at the Time of Ex-Ante Evaluation ></p> <p>The project was consistent with the needs of Mozambique at the time of ex-ante evaluation. There were some fundamental problems in the training of health personnel, such as the lack of unified curriculum guidelines and textbooks, and insufficient knowledge of teaching methods among teachers. In response, the MOH Department of Training was assigned to strengthen the examination and standardization of</p>

the content of the guidance was in charge of strengthening the teaching capacity of the teachers. However, there was a shortage of human resources, and support was needed. On the other hand, the ministry had designated medical technologists, preventive medicine, nursing, maternal and child health nursing, pharmaceutical technologists, and clinical laboratory technologists as priority areas to be strengthened. At the time, the plan was to train approximately 6,200 people in the six priority areas within a five-year time frame. As such there was a strong need to support the six priority areas.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan's ODA policy towards Mozambique¹. It intended to assist human resource development focusing on the improvement of the quality of education and health care services considered prerequisites for poverty reduction and economic growth. It also addressed a cross-cutting issue of the governance through the improvement of administrative functions of the government necessary for achieving two priority issues of "rural development and economic growth" and "human resource development."

<Evaluation Result>

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

2 Effectiveness/Impact

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

The Project Purpose was achieved by the project completion. Standardization of curricula of the six priority courses was underway for authorization to implement at the time of project completion (Indicator 1). By the year 2014, 100% of full-time teachers receive pedagogical training by the project (Indicator 2). The manual for pedagogical supervision was approved by the MOH in October 2015 (Indicator 3). The first pilot national examinations were performed for all students in the final semester of three priority courses (Laboratory Technician, Pharmacy Technician, TMPSM) in July 2015. The national graduation examinations have been duly conducted for the Medical Technician course since the end of December 2011 and Nursing and MCH Nursing courses since July 2013 (Indicator 4).

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

The project effects have continued since project completion. At the time of the ex-post evaluation, out of the 6 priority courses, the course of medical technician has not been approved by MOH yet, although the revision is being planned. In the line of the NPHRD, 88% of full-time teachers have received pedagogical training so far out of a total of 652 full-time teachers which increased from 414 in 2014. That suggested that about 160 teachers have been newly provided with the training since project completion. Concurrently, the manual for pedagogical supervision has been duly utilized and revised as required. After due authorization, the national examinations of all 6 technical courses have been officially conducted since 2017.

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

The Overall Goal had been achieved at the time of ex-post evaluation. According to the survey result, 95% of students of the six priority technical courses have been approved in the national graduation examinations (Indicator 1). Out of the 15 target HTIs, it indicates in the figures that at least 13 HTIs have conducted the approved pedagogical training as planned. Thus, 13 HTIs (86%) have been capable of providing the training on a regular basis (Indicator 2).

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

At the time of the ex-post evaluation, due to the COVID-19 pandemic and the state of emergency inevitably imposed on the country, classes in the training courses have not been conducted. To properly respond to the situation, the MoH and HTIs have had to methodically keep the minimum number of staff coming in and out of the workplace. Better yet, they have enabled teaching staff to manage the courses through the establishment of a digital platform.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results	Source
(Project Purpose) Promote the training of human resources for Health at the Health Training institutions sustainably (priority areas: medical technician, preventive medicine and environmental sanitation (TMPSM), nursing, Maternal and child health (MCH) nursing, pharmacy technician and laboratory technician) for	Indicator 1 Training courses with the standardized curriculum by the MOH are conducted at 15 Health Training Institutes.	Status of the Achievement: partially achieved (continued) (Project Completion) Substantially achieved through the introduction of the training courses on the condition that Output 1 (standardization of curricula for six priority technical courses) and Output 2 (capacity development of teachers at 15 HTIs) were both accomplished. Tasks for standardization for six priority technical courses were underway then due to financial reasons. Once the curriculum of the six priority courses, was to be standardized, it was under the competence of the MOH to authorize the implementation of these training courses in HTIs. Since the 5 curricula in the 6 priority courses were completed and only one curriculum (medical technician) was under revision, full implementation with the standardized curriculum will start from the 2nd Semester, 2016. (Ex-post Evaluation) Although the MOH authorized the implementation of the training courses in the HTIs, the course of medical technician has not been approved yet, due to the priority changes in DNFPs. However, the revision is being planned to implement by 2022. According to the response to the ex-post evaluation survey, Training Centre for Health/Centro de Formação de Saúde (CFS) Cuamba has not conducted teaching based on any standardized curriculum yet, because the CFS has not been designed to provide the medium-level courses to which the priority areas are subject.	Project Completion Report MOH Response to the questionnaire
	Indicator 2 More than 80% of full-time teachers receive pedagogical training.	Status of the Achievement: achieved (continued) (Project Completion) In 2014, 100% of full-time teachers (N=414) received pedagogical training.	Project Completion Report

¹ MOFA, ODA Databook 2010

provision of proper healthcare service.		(Ex-post Evaluation) In 2020, 88% of full-time teachers (N=652) received pedagogical training	MOH Response to the questionnaire																																																																																																									
	Indicator 3 The manual for pedagogical supervision (external supervision) is approved by the MOH.	Status of the Achievement: achieved (continued) (Project Completion) The manual for pedagogical supervision (external supervision) was developed, reviewed, and approved by the MOH in October 2015. (Ex-post Evaluation) It was confirmed that the manual for pedagogical supervision has been continuously used by the HTIs and duly revised as required in 2017.	Project Completion Report MOH Response to the questionnaire																																																																																																									
	Indicator 4 Conduct pilot National examinations of 3 priority technical courses (Preventive medicine (TMPSM), Pharmacy Technician and Laboratory Technician) and National examinations of Medical Technician, Nursing, MCH Nursing courses.	Status of the Achievement: achieved (continued) (Project Completion) The first pilot National examinations were performed in July 2015 for all students in the final semester of three priority courses. 107 students of Laboratory course, 56 of Pharmacy course and 203 students of TMPSM courses in Health Training Institute/ Instituto Ciencias de Saúde (ICS) Maputo, ICS Beira, ICS Chimoio, CFS Chicumbane, ICS Quelimane, ICS Nampula an ICS Tete. By then, the national graduation examinations had been conducted for students in the last semester of the Medical Technician course since the end of December 2011 and Nursing and MCH Nursing courses since July 2013. (Ex-post Evaluation) As shown in Table 1 below, the national examinations of all 6 technical courses have been officially conducted since 2017.	Project Completion Report MOH Response to the questionnaire																																																																																																									
	(Overall Goal) Quality health personnel are nurtured at the Health Training Institutes.	Indicator 1 More than 90% of students of six priority technical courses are approved in National graduation examinations. <table><caption>Table 1: The Success Rate and the Number of Applicants of National Examination by Target Training Course</caption><thead><tr><th>Training course</th><th></th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th></tr></thead><tbody><tr><td rowspan="2">TMPSM</td><td>Success rate (%)</td><td>-</td><td>-</td><td>99</td><td>98</td><td>100</td><td>100</td></tr><tr><td>Applicants</td><td>-</td><td>-</td><td>260</td><td>421</td><td>172</td><td>70</td></tr><tr><td rowspan="2">Pharmacy Technician</td><td>Success rate (%)</td><td>-</td><td>-</td><td>100</td><td>100</td><td>100</td><td>99</td></tr><tr><td>Applicants</td><td>-</td><td>-</td><td>171</td><td>243</td><td>170</td><td>135</td></tr><tr><td rowspan="2">Laboratory Technician</td><td>Success rate (%)</td><td>-</td><td>-</td><td>95</td><td>99</td><td>98</td><td>100</td></tr><tr><td>Applicants</td><td>-</td><td>-</td><td>413</td><td>241</td><td>118</td><td>72</td></tr><tr><td rowspan="2">MCH nursing</td><td>Success rate (%)</td><td>90</td><td>92</td><td>98</td><td>99</td><td>96</td><td>95</td></tr><tr><td>Applicants</td><td>513</td><td>431</td><td>692</td><td>620</td><td>430</td><td>145</td></tr><tr><td rowspan="2">Nursing</td><td>Success rate (%)</td><td>91</td><td>88</td><td>95</td><td>98</td><td>99</td><td>99</td></tr><tr><td>Applicants</td><td>797</td><td>631</td><td>676</td><td>443</td><td>155</td><td>137</td></tr><tr><td rowspan="2">Medical Technician</td><td>Success rate (%)</td><td>79</td><td>100</td><td>95</td><td>89</td><td>95</td><td>100</td></tr><tr><td>Applicants</td><td>258</td><td>341</td><td>255</td><td>259</td><td>297</td><td>139</td></tr><tr><td>Total</td><td>Applicants</td><td>1568</td><td>1403</td><td>2467</td><td>2227</td><td>1342</td><td>698</td></tr></tbody></table>	Training course		2015	2016	2017	2018	2019	2020	TMPSM	Success rate (%)	-	-	99	98	100	100	Applicants	-	-	260	421	172	70	Pharmacy Technician	Success rate (%)	-	-	100	100	100	99	Applicants	-	-	171	243	170	135	Laboratory Technician	Success rate (%)	-	-	95	99	98	100	Applicants	-	-	413	241	118	72	MCH nursing	Success rate (%)	90	92	98	99	96	95	Applicants	513	431	692	620	430	145	Nursing	Success rate (%)	91	88	95	98	99	99	Applicants	797	631	676	443	155	137	Medical Technician	Success rate (%)	79	100	95	89	95	100	Applicants	258	341	255	259	297	139	Total	Applicants	1568	1403	2467	2227	1342	698
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	Indicator 2 Pedagogical training is systematically in operation at all 15 Health Training Institutes supported by the Department of Planning and Curriculum Development.	(Ex-post Evaluation) achieved According to the response from the MOH, it was confirmed that out of 652 full-time teachers, 571 (88%) received pedagogic training and out of 295 half-time teachers, 85 (29%) received the pedagogic training at the HTIs. However, as shown in Table 2. Out of 15 target HTIs, reported the figures to indicate that CFS Inhambane and CFS Nhamatanda may not have provided the pedagogical training to their teachers as desired (Noted, however, according to the response to the ex-post evaluation survey, they have conducted teaching based on the standardized curriculum for the courses). Thus, 13 HTIs (86%) have been capable of providing pedagogical training on a regular basis. Furthermore, according to figures monitored by DNFPs, the actual number of full-time teachers deployed at the HTIs under the NPHHRD already exceeded the target number in 2020 as shown in Table 3. The notable result is deemed to have had ripple effects on the other targets regarding the quality of education, ratios per class, and students, respectively. <table><caption>Table 2: The Number of Full-time and Half-time Teachers Received Pedagogical Training and (The Total Number of Full-time Teachers Employed) in Each 15HTIs</caption><thead><tr><th>HTI</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th></tr></thead><tbody><tr><td>ICS Maputo</td><td>51(51)</td><td>62(62)</td><td>53(53)</td><td>43(43)</td><td>52(52)</td><td>0(50)</td></tr></tbody></table>	HTI	2015	2016	2017	2018	2019	2020	ICS Maputo	51(51)	62(62)	53(53)	43(43)	52(52)	0(50)	MOH Response to the questionnaire																																																																																											
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		ICS Nampula	54(54)	52(52)	51(51)	48(48)	53(53)	54(54)
		ICS Quelimane	103(54)	106(66)	114(64)	116(68)	121(67)	95(69)
		ICS Beira	19(33)	23(38)	16(43)	26(49)	12(53)	0(55)
		ISC Tete	44(44)	49(49)	48(48)	56(56)	56(56)	60(60)
		CFS Lichinga	15(15)	18(18)	17(17)	17(17)	20(20)	21(21)
		CFS Mocuba	9(20)	10(20)	10(20)	10(18)	10(18)	8(18)
		CFS Chimoio	39(46)	35(46)	30(44)	5(48)	4(48)	3(51)
		CFS Inhambane	0(28)	0(26)	0(30)	0(28)	0(30)	0(32)
		CFS Pemba	36(36)	50(50)	58(58)	51(51)	50(50)	49(49)
		CFS Nhamatanda	0(0)	0(0)	0(0)	6(14)	8(9)	0(0)
		CFS Massinga	38(38)	40(40)	39(40)	43(43)	40(40)	41(41)
		CFS Cuamba	5(5)	5(5)	6(6)	6(6)	6(6)	6(6)
		CFS Mocimboa da Praia	11(11)	11(12)	7(13)	7(13)	7(13)	7(13)
		CFS Chicumbane	27(30)	28(33)	31(33)	30(39)	32(37)	24(32)
Note: As the numbers of half-time teachers were not available in some HITs, thus there may be some discrepancies.								
Table 3: Status of the Achievement Regarding the Capacity Development in the Health Sector Addressed in the DNFPs Annual Plan								
				2015 Baseline	2020 Actual	Target		
						2020	2025	
Full-time teachers/ Class Ratio				2	3.9	2.5	4	
Full-time teachers/ Students Ratio				1/15	1/5	1/8	1/4	
Total number of full-time teachers				476	652	534	679	

3 Efficiency

The project cost and the project period were within the plan (ratio against the plan: 83% and 98%, respectively). Also, the outputs were produced as planned. Therefore, the efficiency of the project is high.

4 Sustainability

<Policy Aspect>

Following the preceding NPHHRD (2008-2015), the current NPHHRD (2016-2025) has upheld four pillars: “Increase the availability and equity of health personnel”, “Retain the health personnel at primary health care level”, “Improve the satisfaction, competency of health personnel to provide qualified humanized health care” and, “Improve the legal and institutional health Human Resources Management.” Moreover, the “Five-Year Strategic Plan for Health Sector” (2014–2019) remained valid at the time of the ex-post evaluation. It is to ensure MOH’s position that human resources in the health sector are valuable assets to facilitate the anchoring of the earned capacity.

< Institutional/Organizational Aspect>

The roles and responsibilities of MOH to oversee the quality education in the health sector have not been changed. MOH was reformed in 2018 and it resulted in the formerly responsible for the project, the Human Resources Directorate, which was then under the Department of Training, being reorganized into the National Directorate for Training of Health Professionals (DNFPs). The DNFPs has been empowered by the reform to be in charge of policy planning for human resource development of health workers, formulation of training master plan and program, and registration and certification of health workers.

<Technical Aspect>

According to the survey results, most of the trained counterpart staff in both MOH and HTIs have retained and still been active. Also, it was reported that the equipment provided by the project has mostly remained functional. It was perceived that relevant staff both at the national and provincial levels has sustained the necessary knowledge and skills to perform their respective duties. According to the MOH, although there has been no internal training, most of the staff members have proactively gained more experience through attending conferences in the areas of training as well as publishing research papers in collaboration with Brazilian Experts. For instance, although the head of the pre-service training department trained by the project was retired, DNFPs positively promoted a counterpart staff also trained by the project to be appointed as the head of the department. Therefore, the knowledge and skills of the staff are considered to be sufficient.

<Financial Aspect>

According to the survey result, despite their weak financial foundation with only marginal external financial supports, there has been no national budget allocation from MOH to the HTIs, partly due to the ongoing financial decentralization process led by the Ministry of Economy and Finance –MEF. Effectively, a budget allocated for HTIs is directed from MEF instead of MOH. Nonetheless, it was not possible to accurately verify the operating costs for the capacity development and the financial balance in the HTIs as the accounting data was not available. Under the circumstances, qualified technicians have become increasingly in demand as manifested in the nationwide openings of medium-level technician courses in the HTIs. However, it is anticipated that it may seriously widen the financial gap between the overall cost indispensable for quality education with trained teachers and the limited budget allocated to manage the HTIs.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the financial aspects of the implementing agency. Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The project achieved the Project Purpose and the Overall Goal. It was deemed that the capacities being enhanced have positively affected the quality of education. As for sustainability, although financially challenging to further respond to the ever-increasing demand for qualified technicians in the health sector, the capacity development has been continued in a self-sustaining way through the training program.

Considering all of the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

As there is an uncertainty in budget planning to continue capacity development of teachers and preceptors for healthcare professionals, it is recommended that MOH should develop a viable strategic direction underpinned by a budget plan for capacity development. Given the institutional structure of HTIs, it will enable to enhance the technical capacity of core teachers and staff in the area of nursing and midwifery profession as those are critical to reducing the high rate of maternal-infant mortality in Mozambique.

Lessons Learned for JICA:

The survey result reveals that there has been no national budget allocation from MOH to the HTIs, and the budget allocation for each of the HTIs was in fact processed in the MEF instead. Thus, there was concern that it would not be able to effectively respond to the growing demand for qualified technicians in the health sector. As such, to secure the budget to ensure the sustainability of the project, possible funding mechanisms should have been carefully assessed and discussed to enable prudent cost-sharing after the project in due consideration with the institutional capacity with the project counterparts and relevant stakeholders at the time of the preparatory survey and/or at project formulation



Nutrition curriculum Revision workshop



Pedagogical training in Gaza province