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Assessment of the impact of the rehabilitation works in Maputo primary schools



Prepared by: Eugénio Munguambe

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ACCRONYMS

ICEIDA: Icelandic International Development Agency

DECCM: Maputo City Directorate of Education and Culture

MEC: Ministry of Education and Culture

TORs: Terms of Reference

EPC: Complete Primary School

WFP: World Food Programme

UNICEF: United Nations International Children's Emergency Fund

UN: United Nations

US\$: United States Dollar

INE: National Institute of Statistics

1. EXECUTIVE SUMMARY

Between 2006 and 2008 the Icelandic International Development Agency (ICEIDA), in partnership with the DECCM (Maputo City Directorate of Education and Culture) of the Ministry of Education and Culture (MEC), designed a project to improve infrastructures of the EPCs (Complete Primary Schools) in Maputo city either through complete or partial rehabilitation or by building toilets and introducing student desks and desks and chairs for teachers in eight (8) schools. The cost was U\$ 1.199.468.95 disbursed in three stages.

Within the scope of this project, the ICEIDA recommended an impact assessment study for the activities carried out between 2006 and 2007. This assessment, according to the Terms of Reference (TORs, herein attached) prioritizes the concerns of both direct and indirect beneficiaries (students, teachers, and employees of the schools) about the rehabilitations as well as issues related to the management, maintenance/conservation, sustainability, and recommendations for future interventions.

1.1. Objectives

The aim is to assess the impact of the Works executed in the day-to-day live of the direct beneficiaries (students, teachers, and employees of the schools), the managing institutions, and the community at large.

1.2. Impact

The rehabilitation works of the eight (8) EPCs included in the three stages of the project had positive impact on both the school's image and the students; there was a decrease in the problems they faced regarding the access to good toilets and water to drink and wash hands. And the simple fact that they now have enough desks not only reduced the number of times they got their uniforms dirty and the possible health problems for seating on the floor, as well as stimulated the taste for being in the classroom. Although they may find it hard to admit, certainly

the academic performance has significantly increased. In fact, the elimination or reduction of problems that the project was able to achieve has reflexes on the students' performance, as they had now little to worry about the possible places to satisfy their biological needs, and with being tired as they already have desks.

1.3. Conclusions

The 2006-2008 project for the rehabilitation of the 8 EPCs in Maputo city, conducted by the ICEIDA in partnership with the DECCM, had a positive impact on students, teachers, neighbouring communities, and tutelary bodies. This positive impact was due to the fact that the Works carried out enabled the reduction or elimination of problems such as the infiltration of rainwater, assembly of windows, toilets, classrooms, administrative wards, as well as furniture both for students and teachers. These endeavours significantly improved the school environment in the immediate periods.

As time passed, problems related to the quality of the construction material employed started to show, problems related to the reduced length of time for the delivery of the works by the contractors, problems related to the construction works during lesson time. Thus, the negative impacts over the direct and indirect beneficiaries were not felt immediately during the Works, only with time the more negative signs became visible.

The maintenance of infrastructure that requires Money expenditure has been hard for the schools due to lack of funds, the water pumps at the 25 de Setembro and Mavalane "A" EPCs did not work at all in the first, and worked partially in the second. The EPC Unidade 18 faces similar problems, and for this reason the toilets have been kept closed.

The school boards have been trying to solve punctual problems that usually require large sums of Money. That is the case of the replacement of Windows, ceiling sheets, fencing, covering some holes, etc.

1.4. Recommendations

Execution of works

- There should be a consistent oversight from both the ICEIDA and the DECCM that can contribute to an increased quality of the works performed. The proper oversight would also serve to make accountable those to blame for problems that could have been avoided. However, the oversight should consider factors that are out of the control even of those in charge of the works.

Financier

- **The ICEIDA** should conduct on an annual basis or less constant assessments of the works made of to be made. These assessments will allow the institution to be updated about the progress made, to detect the problems on time and suggest alternatives for solving them;
- The interventions should try to be the broadest possible so that other infrastructure in need of rehabilitation are not neglected. Although this is a delicate issue as it involves the mobilization/allocation of funds, general interventions like the those made in some schools included in the project are worthy of mention.

The School board and teachers, employees, students, and communities

- The school Board needs to be dynamic in trying to find solutions for the problems that compromise the sound functioning of the schools. The school Board should include in its agenda the mobilization of funds for certain works that do not require a lot of funds and effort;
- Students must be constantly motivated to care for their school. They must interiorize the idea of identifying themselves with the school. The cleaning days should be systematic in the schools so that the effort is not in vain;
- The awareness should also involve both parents and carers. The creation of a parents council would not only help solving some problems related to academic performance but also problems with the school maintenance;
- The school Board, teachers, and employees must also be more demanding towards the students for the care they should have with the desks and toilets.

1.5 Project relevance

This project is very relevant if we take into account the Millennium Development Goals for the education sector. The target is to ensure that by 2015 all boys and girls have a full cycle of primary education. It is a key contribution of a partner of the Mozambican Government to the children of Mozambique, so that they may have a “better chance to build a brighter and healthier future”.¹

1.6 Effectiveness

The project for the rehabilitation of schools from the ICEIDA, in partnership with the DECCM, was conducted within the timeframe established. There were no situations of late delivery of the works, which is very frequent in Mozambique, either because of the late disbursement of funds or due to other reasons outside the contractor’s control (climate, shortage of material in the domestic, and even external, market, etc).

1.7. Sustainability

While a large part of the interviewees reported that to a certain extent, the rehabilitation works were sustainable, the truth is that the quality of the works, including the low quality materials used, provides a different scenario. The fact that the quality is extremely low indicates that after little time there will be a new need to carry out the same rehabilitation, and this results in high costs. To this situation we can add the poor policy for student control, and these students do contribute to the ruin of the rehabilitated part.

¹ Expression taken from the joint programme “Escolas em Florescimento” between the World Food Programme (WFP), the private company from the Netherlands TNT, and the United Nations Children Fund (UNICEF), and the government of Mozambique that aimed at delivering, by 2005, drinking water and sanitation to schools. Further details on New Technologies for Mozambican Schools thanks to the PMA, TNT and UNICEF (Available at [http://www.unicef.pt/18/12_09_05_pr_Roundabout_\(port\).pdf](http://www.unicef.pt/18/12_09_05_pr_Roundabout_(port).pdf))

2. INTRODUCTION

The project for the rehabilitation of the EPCs in Maputo city started in 2006 and went up to 2008. During this period of time 8 EPCs were rehabilitated, namely: EPCs of Minkadjuine, Munhuana, Unidade 13, Unidade 18, Mavalane “A”, 24 de Julho, 25 de Setembro, and Guaxene. The Minkadjuine EPC was the pilot for this project under assessment.

This project was conducted in three stages. The first stage was in 2006 and included the rehabilitation of the EPCs of Minkadjuine, with 1468 students, and Munhuana, with 1584. The rehabilitation works, as well as the equipment of the school with student desks and desks with chairs manufactured by the companies KCS Construções and Jossefa Macamo. This phase had a US\$ 146.634.58 budget. The second phase was conducted in the following year and included four (4) EPCs, namely: Mavalane “A”, with 2597 students, Unidade 13, with 2589 students, 24 de Julho, with 1332 students, and Guaxene, with 448 students. For this phase a budget of US\$ 548.627.28 was allocated, and the companies responsible for the works were KCS Construções, Lema Construções, and Jossefa Macamo, the later supplying school furniture.²

The third and last phase was in 2008. The budget allocated for this phase was US\$ 504.206.99 and three (3) schools were selected, namely: the EPC 25 de Setembro, with 2615 students, the EPC Unidade 18, with 3157 students, and the EPC 24 de Julho, with 1332 students. The companies in charge of the construction works were KCS Construções, Lema Construções, and Jossefa Macamo, the later supplying school furniture.³

2.1 Project context

The school rehabilitation project from the ICEIDA in partnership with the DECCM comes in a situation where the quality of education is severely criticized. In the primary education, where

² ICEIDA, “Relatório final da reabilitação de escolas”, Maputo: ICEIDA, 2008. p.2

³ ICEIDA, 2008:2

the project focused, the debate has been around factors related to problems in learning the second language (Portuguese), irrelevance of the curricula, training of teachers, etc.⁴

This positioning ignores or minimizes the importance that school facilities and their equipment with furniture has in the quality of education. In fact, there were a considerable number of schools whose infrastructures were considerably degraded.

Out of a total of 104 primary schools where 251.000 students were enrolled, in Maputo city, 22 were in a critical state of degradation or lacked basic infrastructures for a proper functioning. It is in this context that the ICEIDA, in partnership with the DECCM defined the eight (8) schools in order to “give a fresh image and joy”.⁵

2.3 Objectives

The aim is to assess the impact of the works executed in the daily lives of the direct beneficiaries (students, teachers, and school employees), of the managing institutions, and the community at large. The specific objectives of the study are: a) to know the statistical data of the beneficiaries (number of students, teachers, employees, distribution by age and sex); b) to understand the strategies adopted for the conservation of the areas rehabilitated and materials provided; c) to analyze the costs involved and the current rehabilitation needs; d) to assess the relevance and sustainability of the project. It also aims at serving as a platform to inform future interventions.

2.4 Methodological procedures

In order to conduct this work, a total of 43 semi-structured interviews and inquiries, with the minimum distribution of 8 per school, the observations and some reading of relevant documentation related to the project (reports, plans, statistical data), as well as documentation on the issue of the construction sector for social sectors.

From direct observation, collective and individual interviews, and inquiries, it was possible to identify the impact the rehabilitation works had on the daily lives both the direct and the indirect

⁴ INDE, Grupo de avaliação programa de desenvolvimento profissional apoiado pela finida, Maputo: Maputo: INDE, 2003.

⁵ ICEIDA, “Relatório e pedido da DECCM”, Maputo: ICEIDA, 2008.

beneficiaries. It was possible to identify the various positive or negative opinions around the rehabilitation works. It was also possible to outline a set of guidelines to guide future interventions.

On the other hand, the comparison between the previous situation and the current, along with the use of pictures made it possible to see the transformation on the schools covered by the rehabilitation project.

3. THE SCHOOLS

3.1 Areas of action, costs, contractors, and beneficiaries by class

The rehabilitation project prioritized the general rehabilitation (EPC Unidade 13, EPC 24 de Julho, EPC de Mavalane, EPC 25 de Setembro and EPC Unidade 18) except for the EPC Minkadjuine, EPC de Munhuana e EPC de Guaxene.

Table 1: schools and types of rehabilitation/intervention

Year	Name of School	Works carried out	Nr. of classrooms	Student desks	Desks with chairs
2006	EPC. Minkadjuine	Placement of toilets for students. Replacement of ceiling sheets.	10	250	10
2006	EPC Munhuana	Replacement of ceiling sheets.	15	375	15
2007	EPC 24 de Julho	General Rehabilitation. Placement of toilets for students	10	250	10
2007	EPC Unidade 13	General Rehabilitation	12	300	12
2007	EPC Mavalane "A"	General Rehabilitation. Placement of toilets for	12	300	12

		students			
2007	EPC Guaxene	Placement of toilets for students and teachers			
2008	EPC Unidade 18	General Rehabilitation.	17	365	14
2008	EPC 25 de Setembro	General Rehabilitation Rehabilitation of the external wall.	15	375	15
Total			91	2215	88

Source: ICEIDA, 2008

Table 2: Costs of rehabilitating the schools, contractors, and oversight

Name of School	Costs involved	Responsible Contractor	Oversight
EPC. Unidade 18	5290926.07 mt	KCS Construções	DECCM – Maputo City Directorate of Education and Culture
EPC. Unidade 13	2.812424.80 mt	KCS Construções	
EPC. 24 de Julho	3155499.79 mt	KCS Construções	
EPC. Minkadjuine	44.663.29 mt	KCS Construções	

Table 3: Distribution of beneficiaries by school, standard, and age

Noma of School	Beneficiaries	Standards	Age
EPC. Unidade 18	3157	From Std. 1 to 7	From 6 to 13 years
EPC. Unidade 13	2589		
EPC. 24 de Julho	1332		
EPC. Minkadjuine	1468		

Source: ICEIDA, 2008

4. THE SCHOOLS' SITUATION BEFORE AND AFTER THE REHABILITATION⁶

4. 1. EPC of Minkadjuine before and after the rehabilitation

The Minkadjuine Complete Primary School had a toilet in dreadful conditions. The roof, apart from allowing the entry of rainwater and Sun rays, claimed for cleaning. The walls and floor of the classrooms and the school Board also claimed for rehabilitation.⁷

This school benefited of rehabilitation of the student's toilets and cleaning, and replacement of the ceiling sheets. Apart from this intervention, the school received 220 student desks and 10 desks with chairs.

The EPC Minkadjuine is a very clear example in this sector of intervention. The problem with the rain, which caused concern to parents, teachers, tutelary institutions, as well as to the students themselves was solved, thus, allowing the normal course of the lessons, as we can see from the pictures below.

⁶ This chapter was based in the pictures taken before and after the rehabilitation works, the ICEIDA's final report of the rehabilitation of schools.

⁷ Colective interview with students from the EPC Minkadjuine and Paulo Guluve, Escola Primária Completa de Minkadjuine.



Picture 1 e 2. EPC Minkadjuine before and after the rehabilitation

4.2. EPC of Guaxene after the rehabilitation of the toilets

The problems of the Guaxene EPC were not only the toilets. According to Augusto José Nhaca, headmaster of the school, most, if not almost all students, had lessons while sitting on the floor due to the lack of desks. For an universe of 11 classes, each of them, according to the headmaster, with an average 50/55 students, the school only has a total of 38 desks.⁸ There were also problems with the fencing, as people use the school yard as a passage. The painting and the floor are also degraded.

The Guaxene EPC benefited of the placement of toilets for students and teachers, and a drinking fountain which were, actually, a new build.

Currently, one of the flushers and one of the taps of the drinking fountains are malfunctioning. Although the supplier has been notified, according to the headmaster Augusto José Nhaca, it did not address the issue. Apart from these issues, the school has no problems related to the construction works already completed. The management of the toilets, stressed the headmaster, is done by the school employees and in shifts following the beginning and the end of the lessons in the three (3) shifts in question.

⁸ Pindula, 2007.



Pictures 3 and 4 toilets of the Guaxene EPC after the rehabilitation

4. 3. EPC Munhuana before and after the rehabilitation

At the Munhuana Complete Primary School the rehabilitation focused on the gymnasium and the ceiling. In the ceiling of the gymnasium there was a replacement of the lusalite tiles for zinc sheets, whereas in the ceiling there was a replacement of the damaged lusalite tiles and cleaning, as shown in pictures 5 and 6.

According to Madalena Ndimande, Deputy Pedagogic Director, the gymnasium is currently in very poor conditions and the zinc sheet risk falling, which endangers the health of both students and teachers. Furthermore, there are classrooms without ceiling, the false ceiling is damaged and the Windows are broken.

The pressing needs, according to Ndimande, are the mitigation of the effects of the rain and the rehabilitation of toilets whose septic tanks are filled with water. In fact, we the rains in early February, the courtyard and the classrooms were flooded, and books were damaged⁹.

Before the rehabilitation, the roof and toilets of the Munhuana EPC were in very bad conditions. The rainwater would often drip from the roof and the students sat on the floor. Due to the poor

⁹ The EPC Minkadjuine was the one who offered books after the damages caused by the rain.

drainage capacity of the soil, even with low intensity rain, the courtyard would be flooded and sometimes the water got inside the classrooms.



Pictures 5 and 6 EPC Munhuana before and after the replacement of the roofing

4.4. EPC 24 de Julho before and after the rehabilitation

At the 24 de Julho Complete Primary School, before the rehabilitation, apart from the rainwater and sun rays, the walls also needed new painting. The roof covering the classrooms made an intense noise in rainy days, and the noise from the outside (cars, people) would come through the walls and be heard in the classrooms. The toilets were out of order, the blackboards and the doors were also degraded. This school received a general refurbishment, including the toilets for students, with a total cost of 2.722.019.56 Meticaís. Apart from these works, this school received 250 student desks and 10 desks with chairs for teachers.

The other interventions in the toilets also brought significant changes with regards to the previous situation. This contrast is better observed when we compare the pictures prior to the rehabilitation to those after.



Pictures 7 and 8 EPC 24 de Julho before and after the rehabilitation

4.5. EPC Unidade 13 before and after the rehabilitation

The Unidade 13 Complete Primary School had a situation pretty much similar to that of the previous school. It actually had problems with the roof (infiltration of rainwater and noise), painting, the toilets, which although in use they were not in good conditions, lack of glass on the windows, and blackboards.

The Unidade 13 Complete Primary School also had rehabilitation works that substantially changed its image. It was a general refurbishment, of which the most evident signs are the roof and toilets. The work carried out also includes the rehabilitation of drinking fountains.



Pictures 9 and 10 EPC Unidade 13 before the rehabilitation

4.6. EPC Unidade 18 before and after the rehabilitation

The Unidade 18 Complete Primary School faced a similar situation, thus, it benefited from a general rehabilitation including the toilets for students and teachers, water piping and the fencing wall. It needed, in fact, toilets, roof rehabilitation, new painting, walls and floor. This means that most of the schools were in need of an almost complete rehabilitation.

At the Unidade 18 EPC the toilets are in a good condition although the student's toilet is partially open due to frequent problems with the water pump.



Pictures 11 and 12 EPC Unidade 18 before and after the rehabilitation

4.7. EPC Mavalane “A” before and after the rehabilitation

The school has 12 classrooms and one gymnasium that sheltered to streams before the rehabilitation. It had problems related to the roof that allowed rainwater in, lack of student desks and toilets in very bad conditions. The drinking fountains no longer worked and the classrooms did not have glass on the windows. The school was, thus, in terrible conditions.

With the beginning of the project for rehabilitation and equipment of this school, the situation changed significantly. In the roof, some zinc sheets that were still in good conditions were re-used. The toilets improved significantly and are still in good conditions, the same happening with

the student desks that were introduced.¹⁰ Bars were also installed due to possible acts of vandalism.



Pictures 13 and 14 EPC Mavalane “A” before and after the rehabilitation

4.8. EPC 25 de Setembro before and after the rehabilitation

Before the rehabilitation, the 25 de Setembro EPC had problems with the roof, classrooms, including the administrative section. The teachers’ toilets were also in poor conditions, the same with the furniture and drinking fountains.

With the ICEIDA-DECCM project, the school received the rehabilitation of the classrooms, including the ceiling, the administrative sections, storage, installation of drinking fountains and furniture for teachers and students.



Pictures 15 and 16 EPC 25 de Setembro before and after the rehabilitation

¹⁰ Interview with Aida Estevão Manhiça, head of Head Office at the EPC Mavalane, 03 April, 2009.

5. THE IMPACT

This exam concerns the immediate impact the project had on its beneficiaries. The perceptions began to change with time due to a number of factors, reason why the next exam will comprise the limitations, conservation, and sustainability.

5.1. Students

5.1.1. The toilets, class rooms, and drinking fountains, and student desks

Almost all the students interviewed¹¹ are happy with the results of the conservation works. For most of them, apart from the fact of their schools being more beautiful, they also had a better school environment.¹² The problems with the rain disturbing lessons were overcome, however, they regretted the problems they faced as the construction works were carried out in parallel with the lessons.¹³

The rehabilitation works of the 8 EPCs included in the three stages of the project had positive impacts on the image of both the school and the students; reduced the problems facing the schools with regards to access to toilets in sound conditions, as well as to water for drinking, washing hands; and while the simple fact of having enough student desks not only reduced the frequency in which the students got their uniforms dirty and the possible health problems for seating on the floor, it also stimulated the taste for being in the classroom. Although they find it hard to admit that their academic performance increased significantly. In fact, the elimination of reduction of the problems with the project reflects in the students' academic performance. They little had to worry about possible places to for their biological necessities, little problems they had to worry about getting tired as they already had desks.¹⁴

¹¹ There us some dificulty in quantifying the students interviewed because some interviews were colective and there was no attention to the registry of attendance. For the cases where it was possible to distribute the inquiries, the names of the students interviewed are listed in the annexure under sources, discriminated by category (students, teachers, employees, neighboring communities to the EPCs)

¹² 100% of the students surveyed indicate that the works for rehabilitation of the classrooms, administrative sections, toilets, made the school beutiful.

¹³ This situation was also noted by Aurora Vicente, Director of *KCS – Construções, Consultoria e Serviços*.

¹⁴ The interview with the pedagogic director of the EPC Mavalane "A" confirms the situation.

a) The toilets

The rehabilitation of the toilets not only gave the students the possibility of doing their natural necessities in proper places within the schools, as also reduced the risk of urinary diseases due to long periods of contention.¹⁵ And the situation was more complicated if they wanted to poop. The bad smell released from the toilets and improvised urinals spreading throughout the school including the classrooms, thus, making it unbearable to stay indoors or within the school premises for long. The likelihood of getting diseases such as cholera and malaria was considerably high.¹⁶ Therefore, the rehabilitation of the toilets addressed the natural necessities of students, teachers, and school employees.

It also created a more pleasant environment, thus, allowing the students to stay longer in school. It further reduced the exposure of the stakeholders to possible diseases. The lessons were no longer disturbed by the need to find an ideal place “to pee”.¹⁷

b) The roof

The impact of the rehabilitation of the roof can be assessed in relation to the impact that the previous condition had on the normal course of lessons. The rain, typical to the rainy season, often stopped the lessons because it infiltrated in classrooms wetting the walls, the floor, and the students and teachers themselves, in some cases causing lessons to be interrupted.¹⁸ Apart from

¹⁵ One of the measures to avoid urinary tract diseases is “not to withhold the urine for long periods; ideally one should urinate every two or three hours”. Starting from this finding it could lead to diseases. For more details see: Toda biologia.com, “Infecção urinária” (available in http://www.todabiologia.com/doencas/infeccao_urinaria.htm). Students with polaciuria (need to urinate more often than normal, although in small quantities – urinate little, but many times), with a constant sensation of being willing to urinate) would have great difficulties.

¹⁶ It also adds to the problem of still waters, very frequent in the Munhuana and Minkadjuine EPCs.

¹⁷ Colective interview with students from the eight (8) school; interviews to Paulo Guluve, teacher at the EPC Minkadjuine, Paulo Manhiça and António Sevene teachers at the EPC Munhuana, Izidro Feliciano Muguambe, teacher at the EPC Unidade 13.

¹⁸ At the Munhuana and Minkadjuine EPCs there are serious problems in the event of rain. The rains from early February this year invaded the classrooms and damaged the free distribution books for the students. In Minkadjuine, the courtyard in constantly flooded in the rainy season (interview with Ivan Macome and Sheila Ibrahim residents at the *bairro Indígena*, 01 April, 2009, and with an anonymous source at *bairro* Minkadjuine, 02 April, 2009.)

this, there was the loud noise caused by the rainfall, making it hard to listen to anything related to the lesson.

This situation made the parents and carers comfortable about sending the students to their respective schools.¹⁹ For the parents and carers that previous situation was the same exposing their children to the rain, thus, the possibility to get a fever. So, if it started to rain while the student was still at home, it meant that he would be one more day without going to school, and if the rain continued, more days would add to that. It was a situation somehow shared by the teachers themselves.

With the rehabilitation of the roof, not only it became possible to have more peaceful lessons in the event of rain, as well it was ensured that both parents and carers and students did not fear going to school on a rainy day.

c) The drinking fountains

The drinking fountains were quite significant not only to drink water but also for hygiene. In the event of a cholera epidemic, for instance, specially in the rainy season, and considering the behaviour of the students who attended the primary education, the placement of drinking fountains was a significant step for the health of both students and teachers.

d) School furniture: student desks

The ICEIDA-DECCM intervention was not limited to rehabilitation works. It included the introduction of student desks and desks with chairs for teachers. The student desks introduced in the four schools covered by this study totalled 106, whereas the desks with chairs were 46 in total.

¹⁹ Interview with Ivan Macome and Sheila Ibrahim residents at the bairro Indígena, 01 April, 2009 and with an anonymous source at Bairro Minkadjuine, 02 April, 2009.)

Table 4: distribution of desks by schools

Name of School	Std. Desks	Desks with chairs	Costs ²⁰	Constructor	
Escola Primária C. Minkadjuine	250	10	28.966.28 usd	KCS	Fábrica de Estofos, Móveis e Decorações Josefa Macamo.
Escola Primária C. 24 de Julho	250	10	99480.00 usd	KCS	
Escola Primária C. Unidade 13	300	12	36.728.52 usd	KCS	
Escola Primária C. Unidade 18	365	14	145.083.00 usd	KCS	
Escola Primária C. 25 de Setembro	375	15	499220.00 usd	Lema	
Escola Primária Completa Mavalane "A"	300	12	36728.52usd	Lema	
Escola Primária Completa de Munhuana	375	15	42975.56 usd	KCS	

Source: ICEIDA, 2008

This is a very positive intervention with significant impacts in both the normal course of lessons and the health of students and teachers. Before the introduction of student desks in the schools, the students would watch lessons while sitting on a floor in very poor conditions. Furthermore, there was the concern of always bringing something to sit on to avoid the dust on their clothes. This situation also came with "little battles" for the best spot in the room.

The introduction of new desks not only gave the students motivation to have an increase interest in going to school as well as it represents a significant contribution to improve the students' performance by reducing the concern about bringing something to sit on, and the fatigue of sitting on the floor.

The introduction of teacher's desks also meant creating appropriate working conditions for the teachers. It is a very positive intervention for the organization of the teachers, as well as for the establishment of an improved work environment between teachers and students.

²⁰ Only costs of student desks

e) The windows

The rehabilitation of the windows was extremely useful to increase the students' concentration during the lessons and to reduce the noise they caused. The great exposure to the external environment reduced significantly. The safety²¹ levels also increased significantly for students and teachers, as well as for the school property.

5.2. The teachers

The rehabilitation was not limited to the spaces that are specifically for students, it also covered spaces that are typically for teachers (teachers' lounge, desks with chair).

However, taking into account that teachers and students were within the same environment, the rehabilitation of the spaces for students also has positive implications on the teachers' work. In fact, as noted by Tereza Mangueze, teacher at the EPC Mavalane, "the teacher is there to serve the students, and if there are good conditions in place for the student to perform well, the teacher will be equally pleased".²²

The rehabilitation of spaces that are "exclusive" for teachers, such as the toilets of the Guaxene and 25 de Setembro, and Unidade 18 EPCs, and the general rehabilitation of the Unidade 18 and Unidade 13 EPCs represent significant gains for the teachers themselves. These works significantly improved the teachers' work environment either by creating more comfort or by creating a proper space for them to cater for their natural necessities.

5.3. The communities

The communities living in the vicinity of the schools or that have children or other relatives in the schools covered by the project are, in general, pleased with the rehabilitation and equipment of the schools with furniture.

João Francisco Dembo, resident at the Mavalane "A" quarter, noted that the EPC Mavalane "A" improved substantially with the rehabilitation works. It became a prettier school, fact which does

²¹ At Mavalane "A" and 24 de Julho EPCs the rehabilitation of windows included the placement of bars for safety reasons. See pictures in annexure.

²² Interview with Teresa Ernesto Mangueze, teacher at the EPC of Mavalane "A"

please only the students as well as the parents and carers. The introduction of desks became an added value in a urban environment where children know they should study while sitting on desks. The quality of education, according to our interviewee, will certainly improve with the works carried out.²³

In the case of the EPC 24 de Julho, the testimony of João Juvêncio Cuna, resident in the Alto Maé quarter, indicates that the school improved greatly with the rehabilitation. In fact, as he stressed, the students that were sent to other schools due to the terrible conditions of this school returned after the rehabilitation.²⁴

At the EPC Munhuana the information gathered locally praise the initiative to rehabilitate and equip the school with furniture, but the current conditions of the school cloud the effort made. According to Ivan Macome and Sheila Ibrahim, both residents at the Inhagoia quarter, whose nephews are studying in this school, the sanitation problems are serious and the only thing positive is the introduction of student desks. Despite the effort made with the works, the fact that being an area with a soil with poor drainage, and that the existing amount of water is higher if compared to other places, causes the residents' assessment to focus on the need to find an effective solution for the issue of sanitation.²⁵

Abílio Frenque Mbumba, resident at the Aeroporto "A" quarter highlighted that the work done at the EPC Unidade 18 was important to improve the image of the school and the quality of education.

However, the very quality of the works leaves some doubts. For him, it is unacceptable that in a short period of time the toilets stopped functioning and there is no effort on sight from the school Board to overcome the situation. According to Mbumba, there should be a mechanism to make the contractors accountable and raise students' awareness on how to better maintain the infrastructures.

²³ Interview with João Francisco Dembo, resident in *bairro* Mavalane "A", 01 April, 2009.

²⁴ Interview with João Juvêncio Cuna, resident in *bairro do* Alto-Maé, 30 March, 2009.

²⁵ Interview with Ivan Macome and Sheila Ibrahim residents in the *bairro* Indígena, 01 April, 2009.

The EPC Minkadjuine, which was the initial focus of the project, is seen by the community with some reservation. “When it became clear that the school had been selected for the rehabilitation because of its deplorable conditions, we were all happy. But after the completion of the works the infrastructures began to corrode, and in the event of rain the floor gets flooded, thus, compromising the normal course of the lessons.”²⁶

6. THE CONSTRAINTS

a) The contractors

According to Aurora Vicente, Director of KCS – Construções, Consultoria e Serviços, the problem of the quality of the works executed within the scope of the ICEIDA-DECCM project should not be seen unilaterally. There are external issues beyond their control and limits as executors of the project. Carrying out the rehabilitation during the school period, caused the works to be executed during the night.

Besides that, there were the short deadlines for completion of the works, and the poor quality of the construction materials available in the domestic market. Likewise, the tendency to select companies presenting a low budget also reflects on the quality of the works.²⁷

Therefore, altogether these factors contributed to compromise the final quality of the works; however, the conservation by the schools is also crucial. If the schools got careless after the delivery of the works by the contractors, that is no longer the contractor’s problem, concluded Aurora Vicente.

b) Teachers, students, and communities

At the EPC Minkadjuine it was found that despite the rehabilitation the roof still had problems of rainwater infiltration. The courtyard was also in terrible conditions. Some think there is a lack of sensitivity with regards to other real problems facing the school. It would be

²⁶ Interview with an Anonymous source, Bairro de Minkadjuine, 02 April, 2009.

²⁷ Interview with Aurora Vicente, Director of KCS – Construções, Consultoria e Serviços

recommendable, according to the interviewees, to carry out a complete rehabilitation of the school because it seems that it is only a fully rehabilitated school would be important and worthy of notice.

Through their own means they solved part of the problems; the toilets are in good conditions and the water runs normally; but with the rain the courtyard gets totally flooded.



Picture 17 and 18 flooded courtyard at the EPC Minkadjuine and Gymnasium at the EPC Munhuana after the replacement of the roofing

At the gymnasium of the EPC Munhuana new zinc sheets were placed replacing the lusalite. However, no so long after the roofing conditions deteriorated, thus, jeopardizing the life of students and teachers. The courtyard also gets flooded with the rainwater and the sanitation conditions even worse.²⁸ The same can be said with regards to the EPC 24 de Julho (the best rehabilitation was the toilet), but the difference is that the roof was rehabilitated stopping the infiltration of rainwater.

At the EPC Unidade 13 the electrical system is deficient, the material used had poor quality. There is now a problem with the electricity where the material was stored during the rehabilitation, the separation between classrooms has an opening close to the ceiling, causing disturbance to the lessons. In the toilets the material was replaced with the school's own funds because the material put during the rehabilitation was already damaged due to its poor quality; the water does not go up to the tanks.

²⁸ Interview with Ivan Macome and Sheila Ibrahim residents at the *bairro* Indígena, 01 April, 2009

However, the observations we could find that despite the initial effort, there is still a lot to do specially in the Unidade 13 and Minkadjuine EPCs. The first needs a gymnasium because the students have their physical education in the courtyard, and electricity to illuminate all the blocks. The second school need a gymnasium because the students have their physical education inside the classrooms.



Picture 19. Physical education session in one classroom at the EPC Minkaduine

The above situation has major implications in the academic performance. The solution for the constant flooding of the soil was using the classrooms for both physical education activities and intervals. This is a situation where the students come into the classroom and only leave when they are going home, except when they go to the toilet. Contrarily, the condition of the toilets in this school is quite good.

At EPC Unidade 18, which had a general rehabilitation, the toilets are in good conditions despite problems with water supply. This situation forces the school Board to keep them closed, and exposes the problems that compromise the performance and health of students, teachers, and neighbouring communities as they look for improper places for their natural necessities.

The EPC Mavalane “A” is in good condition, however, the student desks show signs of degradation because they were only assembled without being properly bolted or nailed.

At the EPC Munhuana the problem with the student desks lies on the fact that they were made out of wet wood, and when it started to dry, it got damaged.²⁹ At the EPC Mavalane “A” there was a deficient placement of Windows, which caused the glasses to fall. But, in general, the windows are in good state of conservation.

7. CONSERVATION

The current status of the schools puts in question the quality of the construction materials used, the nature of the work executed, and the conservation strategies adopted by the schools and the tutelary bodies, etc.

The conservation strategy used is the cleaning carried out by the students, and where employees exist they will carry out the cleaning and control the possible damages that might be caused by the students. The control, also established by the teachers, is crucial during the breaks when substantial numbers of students spread around the school area. Usually the students contribute for the degradation of the walls, painting, and desks. This strategy is applied successfully at the EPC Minkadjuine. There is one school employee who controls the students and every time they go into the toilets she follows. At the EPC 24 de Julho the toilets are in good conditions because the school cleaning staff has been cleaning them constantly.

There are also small routine works developed in the schools for their conservation, but for large enterprises requiring high investments the students, employees, and teachers little or nothing can do.

With regards to the student desks, there are no problems worthy of reporting. They are still in good conditions, despite some writings made by students. The continuous control established at the schools, starts from the students themselves to the teachers prevent or mitigate the damage to the student desks.

²⁹ Interview with Madalena Ndimande, Deputy Pedagogic Director at the EPC Munhuana.

8. SUSTAINABILITY

Although most of the interviewees stated that to a certain extent the rehabilitation works were sustainable, the truth is that the quality of the works, including the low quality materials used, shows a different scenario. The poor quality shows that not long after the completion of the works there will be a new need to do the very same rehabilitation and this has high costs. This situation adds to the poor policy to control students, who in turn contribute to damage part of the rehabilitated areas.

In order for the rehabilitation works to be sustainable from the school's point of view, there should be campaign for student awareness so they will understand the importance of the school and identify themselves with it and to report the transgressors to the teachers.

A policy for control, monitoring and recurrent assessment of the rehabilitation works carried out by the contractor should be designed, including the assessment of materials used. If we want the rehabilitation activities to be long lasting, more attention should be paid to the quality of the materials used.

9. CONCLUSION

The 2006-2008 project for the rehabilitation of the 8 EPCs in Maputo city, conducted by the ICEIDA in partnership with the DECCM, had a positive impact on students, teachers, neighbouring communities, and tutelary bodies. This positive impact was due to the fact that the works carried out enabled the reduction of elimination of problems such as the infiltration of rainwater, assembly of windows, toilets, classrooms, administrative wards, as well as furniture both for students and teachers. These endeavours significantly improved the school environment in the immediate periods.

As time passed, problems related to the quality of the construction material employed started to show, problems related to the reduced length of time for the delivery of the works by the contractors, problems related to the construction works during lesson time. Thus, the negative

impacts over the direct and indirect beneficiaries were not felt immediately during the Works, only with time the more negative signs became visible.

The maintenance of infrastructure that requires money expenditure has been difficult for the schools due to lack of funds, the water pumps at the *25 de Setembro* and *Mavalane "A"* EPCs did not work at all in the first, and worked partially in the second. The EPC *Unidade 18* faces similar problems, and for this reason the toilets have been kept closed.

The school boards have been trying to solve punctual problems that usually require large sums of money. That is the case of the replacement of Windows, ceiling sheets, fencing, covering some holes, etc.

10. Recommendations

Execution of works

- There should be a consistent oversight from both the ICEIDA and the DECCM that can contribute to an increased quality of the works performed. The proper oversight would also serve to make accountable those to blame for problems that could have been avoided. However, the oversight should consider factors that are out of the control even of those in charge of the works.

Financier

- **The ICEIDA** should conduct on an annual basis or less constant assessments of the works made of to be made. These assessments will allow the institution to be updated about the progress made, to detect the problems on time and suggest alternatives for solving them;
- The interventions should try to be the broadest possible so that other infrastructure in need of rehabilitation are not neglected. Although this is a delicate issue as it involves the mobilization/allocation of funds, general interventions like the those made in some schools included in the project are worthy of mention.

The School board and teachers, employees, students, and communities

- The school Board needs to be dynamic in trying to find solutions for the problems that compromise the sound functioning of the schools. The school Board should include in its agenda the mobilization of funds for certain works that do not require a lot of funds and effort;
- Students must be constantly motivated to care for their school. They must interiorize the idea of identifying themselves with the school. The cleaning days should be systematic in the schools so that the effort is not in vain;
- The awareness should also involve both parents and carers. The creation of a parents council would not only help solving some problems related to academic performance but also problems with the school maintenance;
- The school Board, teachers, and employees must also be more demanding towards the students for the care they should have with the desks and toilets.

11. DOCUMENTS CONSULTED

11. 1. Hard and soft copies

Direcção de Planificação e Cooperação – Ministério da Educação e Cultura, “Estatísticas da Educação” Maputo: DPC-MEC, 2009 (Também disponível em <http://www.mec.gov.mz/img/documentos/20090224020211.pdf>)

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11.2. Interviews

Professores

Adérito Aurélio Mungoi, Escola Primária Completa de Mavalane “A”. Trabalha a 5 anos.

António Sevene, Escola Primária Completa da Munhuana. Trabalha a 3 anos.

Paulo Manhiça, Escola Primária Completa de Munhuana. Trabalha a 3 anos.

Sebastião Mário Guambe, Escola Primária Completa 24 de Julho. Trabalha a 8 anos nesta escola.

Armindo Sarmiento Macamo, Escola Primária Completa Unidade 13. Trabalha a 12 anos nesta escola.

Izidro Feliciano Muguambe, Escola Primária Completa Unidade 13. Trabalha a 3 anos nesta escola.

Paulo Guluve, Escola Primária Completa de Minkadjuine. Trabalha a 12 anos nesta escola

Felizardo José Uetela, Escola Primária Completa 24 de Julho. Trabalha a 8 anos nesta escola

Anónimo, Escola Primária Completa de Minkadjuine. Trabalha a 7 anos nesta escola.

Arlindo Mussacate, Escola Primária Completa 25 de Setembro. Trabalha a 5 anos.

Ilílio Jeremias Armando, Escola Primária Completa 25 de Setembro. Trabalha a 5 anos.

Teresa Manguenze, Escola Primária Completa de Mavalane.

Madalena Ndimande, Adjunta Pedagógica da EPC de Munhuana.

Alunos

Para o caso dos alunos foi privilegiado entrevistas colectivas em todas as escolas. Somente em alguns casos se abordou os alunos individualmente. Desta lista individual incluiu-se:

José Henriques Nhantumbo, EPC de Munhuana, 7 classe.

Amélia Agostinho Zitha, EPC 25 de Setembro, 7 classe. Estuda a 8 anos.

Mauro Tomás, Escola Primária Completa de Minkjene, 7ª Classe, turma E, número 53. Estuda nesta escola desde 2006.

Silva Ana Armando, Escola Primária Completa Unidade 13, 5ª Classe, Turma D. estudo nesta escola a 5 anos.

Eulália António Sambo, Escola Primária Completa 24 de Julho, 1ª Classe, turma 7. Estuda a 1 ano nesta escola.

Nélia Djeni, Escola Primária Completa Unidade 13, 5ª Classe, Turma D. Estuda a 5 anos nesta escola.

Sofia Basílio Juma, Escola Primária Completa de Minkadjuine, 7ª Classe, Turma D, Número 60. Estuda nesta escola a 2 anos.

Antonieta Armando, Escola Primária Completa 24 de Julho, 2ª Classe, Turma 5. Estuda nesta escola a 2 anos.

Encarregados de educação

Abílio Mbumba, bairro do Aeroporto “A”

João Francisco Dembo, residente no bairro de Mavalane “A”.

João Juvêncio Cuna, residente no bairro de Alto Maé.

Ivan Macome residente do bairro Indígena

Sheila Ibrahim residentes do bairro Indígena.

Anónimo, Bairro de Minkadjuine, 02 de Abril de 2009.

Empreiteiros

Vicente, Directora da KACS – Construções, Consultoria e Serviços.

DECCM

Sr. Arlindo Matlombe, chefe de departamento de Planificação da DECCM.

Annexure 1: FORM OF THE STUDENTS` INQUIRYS

O presente inquérito enquadra-se no âmbito do projecto de reabilitação das Escolas Primárias Completas da Cidade de Maputo financiadas pela ICEIDA – Agência Islandesa de Desenvolvimento Internacional educação e Cultura em parceria com a Direcção da Educação e Cultura da Cidade de Maputo (DECCM). O objectivo deste inquérito é avaliar o impacto da reabilitação das referidas escolas na vida quotidiana dos beneficiários directos (alunos, professores e funcionários das escolas) da comunidade em geral e das instituições gestoras.

Nome do inquiridor: _____ :

1. Nome da Escola:.....
2. Nome do aluno:.....
3. Classe:.....Turma:.....Número:.....
4. Há quanto tempo estudo nesta escola?.....
5. Sabe se a escola foi reabilitada ou não? Sim:.....Não.....
- 5.1 Se sim como é que a escola era antes? (marque com **S –Sim** e **N- Não** e **M – Mais ou menos**)
 - a) Bonita
 - b) Feia
 - c) Mais ou menos
 - d) entrava água da chuva
 - e) entravam os raios solares
 - f) As casas de banho funcionavam
 - g) Estava pintada
 - h) A pintura estava cansada
 - i) As chapas faziam barulho quando chovia
 - j) O chão estava estragado
 - k) Via-se as pessoas fora da sala de aulas
 - l) Os quadros não permitiam ver bem o que estava escrito

- m) As janelas faziam barulho
- n) O ar para refrescar entrava bem
- o) Ouvia se o barulho de fora (de carros, pessoas, etc.)

Mais Comentários.....
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6. O que é que acha que mudou com a reabilitação? (marque com **S –Sim** e **N- Não** e **M – Mais ou menos**)

- 6.1 Bonita
- 6.2 Feia
- 6.3 Mais ou menos
- 6.4 entrava água da chuva
- 6.5 entravam os raios solares
- 6.6 As casas de banho funcionavam
- 6.7 Estava pintada
- 6.8 A pintura estava cansada
- 6.9 As chapas faziam barulho quando chovia
- 6.10 O chão estava estragado
- 6.11 Via se as pessoas fora da sala de aulas
- 6.12 Os quadros não permitiam ver bem o que estava escrito
- 6.13 As janelas faziam barulho
- 6.14 O ar para refrescar entrava bem
- 6.15 Ouvia se o barulho de fora (de carros, pessoas, etc.)
- 6.16 Não havia portas
- 6.17 O bebedouro não funcionava
- 6.18 Não tinha carteiras

Mais Comentários.....
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7. Das coisas que foram reabilitadas o que é que acha que foi melhor para si?

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8. Das coisas que foram reabilitadas quais são as que estão a se estragar?

8.1 cobertura

8.2 pintura

8.3 paredes

8.4 chão

8.5 quadros

8.6 bebedouros

8.7 casas de banho

8.8 janelas

8.9 portas

8.10

8.11

8.12

Mais comentários

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9. Se há coisas que estão a se estragar qual é a razão?

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10. Acha que os alunos estragam algumas coisas? Se sim quais

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11. O que é que os alunos costumam fazer para tornar a escola mais bonita, para que não se eestrague?

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12. O que é que acha que devia ser feito para melhora a escola?

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13. Observações

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Annexure 2: formulário do inquérito dirigido a professores e órgão de tutela

O presente inquérito enquadra-se no âmbito do projecto de reabilitação das Escolas Primárias Completas da Cidade de Maputo financiadas pela ICEIDA – Agência Islandesa de Desenvolvimento Internacional educação e Cultura em parceria com a Direcção da Educação e Cultura da Cidade de Maputo (DECCM). O objectivo deste inquérito é avaliar o impacto da reabilitação das referidas escolas na vida quotidiana dos beneficiários directos (alunos, professores e funcionários das escolas) da comunidade em geral e das instituições gestoras.

Nome do inquiridor: _____ :

14. Nome da Escola/Direcção da Educação e Cultura

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15. Nome do inquirido.....

16. Profissão:

17. Há quanto tempo trabalha nesta escola/instituição?

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18. Sabe se a escola foi reabilitada ou não? Sim:.....Não.....

18.1 Se sim como é que a escola era antes? (marque com **S – Sim** e **N- Não** e **M – Mais ou menos**)

p) Bonita

q) Feia

r) Mais ou menos

s) entrava água da chuva

t) entravam os raios solares

u) As casas de banho funcionavam

v) Estava pintada

w) A pintura estava cansada

x) As chapas faziam barulho quando chovia

y) O chão estava estragado

- z) Via se as pessoas fora da sala de aulas
- aa) Os quadros não permitiam ver bem o que estava escrito
- bb) As janelas faziam barulho
- cc) O ar para refrescar entrava bem
- dd) Ouvia se o barulho de fora (de carros, pessoas, etc.)

Mais Comentários.....

19. O que é que acha que mudou com a reabilitação? (marque com **S –Sim** e **N- Não** e **M – Mais ou menos**)

- 19.1 Bonita
- 19.2 Feia
- 19.3 Mais ou menos
- 19.4 entrava água da chuva
- 19.5 entravam os raios solares
- 19.6 As casas de banho funcionavam
- 19.7 Estava pintada
- 19.8 A pintura estava cansada
- 19.9 As chapas faziam barulho quando chovia
- 19.10 O chão estava estragado
- 19.11 Via se as pessoas fora da sala de aulas
- 19.12 Os quadros não permitiam ver bem o que estava escrito
- 19.13 As janelas faziam barulho
- 19.14 O ar para refrescar entrava bem
- 19.15 Ouvia se o barulho de fora (de carros, pessoas, etc.)
- 19.16 Não havia portas
- 19.17 O bebedouro não funcionava
- 19.18 Não tinha carteiras

Mais Comentários.....

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20. Das coisas que foram reabilitadas o que é que acha que foi melhor para si?

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21. Das coisas que foram reabilitadas quais são as que estão a se estragar?

21.1 cobertura

21.2 pintura

21.3 paredes

21.4 chão

21.5 quadros

21.6 bebedouros

21.7 casas de banho

21.8 janelas

21.9 portas

21.10

21.11

21.12

Mais comentários

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22. Se há coisas que estão a se estragar qual é a razão?

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23. O que é que costumam fazer para a manutenção da escola?

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24. O que é que acha que devia ser feito para melhora a escola?

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25. Acha que o que foi feito até agora é sustentável ou não?

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26. Observações

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