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Khaketla, Ramonaheng and Jackson

Schools sanitation in Lesotho



INTRODUCTION

1. This paper focuses on the experiences of the Urban Sanitation Improvement Team (USIT) in improving sanitation in the schools of Lesotho. USIT is a multi-disciplinary team in the Ministry of Interior which is mainly concerned with domestic sanitation but has increasingly been involved with sanitation in schools. USIT has worked with a variety of delivery systems but has found that the most successful, in terms of long-term operations and maintenance, was where the communities first took the initiative to build improved latrines at their schools.

PREVIOUS EXPERIENCE IN LESOTHO

2. Between 1974 and 1980 the Ministry of Health, through its Health Inspectorate, undertook a Primary Schools Sanitation Project funded by UNCDF. The project achieved less than 20% of its targets for a variety of reasons: inappropriate latrine design, lack of manpower and logistical support, and poor response from the community (construction was planned to be by self-help). Furthermore, of those latrines that were built, virtually none are still in use and maintenance of the remainder is very poor. There had been very little motivation of the community and no user education (ref.1).

3. In 1981 and 1982, some improved latrines were built in schools under an IDA-funded Urban Development Project. The schools were merely informed that the latrines would be built, along with new classrooms, and no commitment to maintenance was required of them. Subsequent user education was given, with mixed results. We found that, despite our efforts in the project-aided schools, the impact of our user education has been limited: latrines are still not cleaned properly, nor are they used by all the students, doors get broken and urinals remain blocked. The main factor appears to be the degree of interest shown by the school manager and staff of each school.

4. Since then, USIT has declined to take the initiative in schools sanitation but responds as efficiently as possible to requests for

assistance (see below). The result is, with a few puzzling exceptions, good quality school latrines built by the schools and their communities together with a high level of commitment to maintain the latrines in good condition.

USIT PROCEDURE

5. When a school has seen the need for sanitation and has contacted USIT, a visit is made to meet with the school management, usually represented by the head teacher and the chairman of the school committee. We explain the recommended sanitation technology and, most importantly, we get the management to understand that we will only help them with latrine plans and supervision of construction if they will ensure proper use and maintenance after completion. This approach is then conveyed to the rest of the staff and committee.

6. This initial contact is very important: decisions must be made by the school management and information is collected by USIT team members. To assist this decision-making we have prepared a tape-slide programme which covers most of the points to be discussed. It is entitled "Sanitation, Hygiene & Health in Our Schools"; it explains the main reasons for improving sanitation, it draws attention to the need for proper maintenance, and points out the decisions that must be made by the school management before construction begins.

7. So that USIT can provide a school with plans and cost estimates to meet its needs, the school must provide certain information:

- No. of students and staff (male or female, day or boarding?)
- Plans for future expansion,
- Availability of water (for hand-washing)
- Ground profile (eg depth to rock),
- Sources of funding,
- Community involvement (eg arrangements for labour, skilled/unskilled?).

8. Even when a school is motivated to put a large effort into improving its sanitation there is frequently a shortage of hard cash. Certain items such as stone for walls could be obtained locally but schools aspire to a structure of concrete blockwork. Other materials must also be purchased: pipes, cement, reinforcing steel and roofing sheets. In some cases funding is obtained from an NGO such as a foreign embassy special fund or a church organisation. The schools also organise fund-raising activities and make arrangements for contributions in kind (materials and labour) from students, their families and other members of the community. Further contributions may be obtained, by way of skilled and unskilled labour, through the voluntary Lesotho Workcamps Association.

9. USIT technical staff normally supervise construction activities through site visits at four critical stages:

- When the site has been chosen and the pits marked out for digging, the team goes over detailed plans for the cover slabs with the builder. They also help him to make moulds, and the mixes for the slabs are controlled.
- The next supervision visit is when the pits are dug and foundations are to be laid. Our staff assist the builder in setting out foundations and marking centre lines for substructure blockwork.
- When the substructure is complete, the placing of cover slabs is supervised. The team also helps to mark out the superstructure blockwork.
- On the final visit all finishing touches are done. Checks are made on the arrangement of seat covers and plugs (to ensure proper use of the alternating pit principle), vent pipes must be vertical and fly screens in place, cover slabs should be well mortared. Plastic posters are fixed in each cubicle (see figure 1).

10. When construction is complete and final inspection is made we ensure that, before the school latrines are used, we give user education to all the students and teachers. A second tape-slide programme has been prepared for this. It is shown to one or two classes at a time. A question-and-answer session follows, after which posters are given out (see figure 2). These serve as reminders of the "10-Point Programme for School Health", referred to in the tape-slide programme.

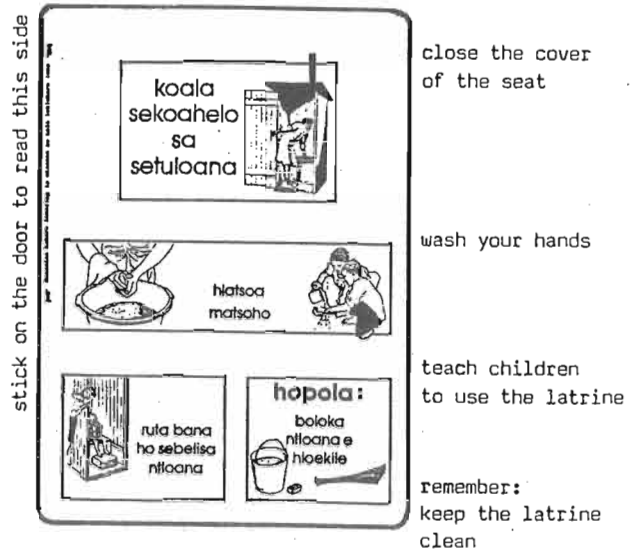


FIGURE 1: User Education Poster (Normal Size A4)

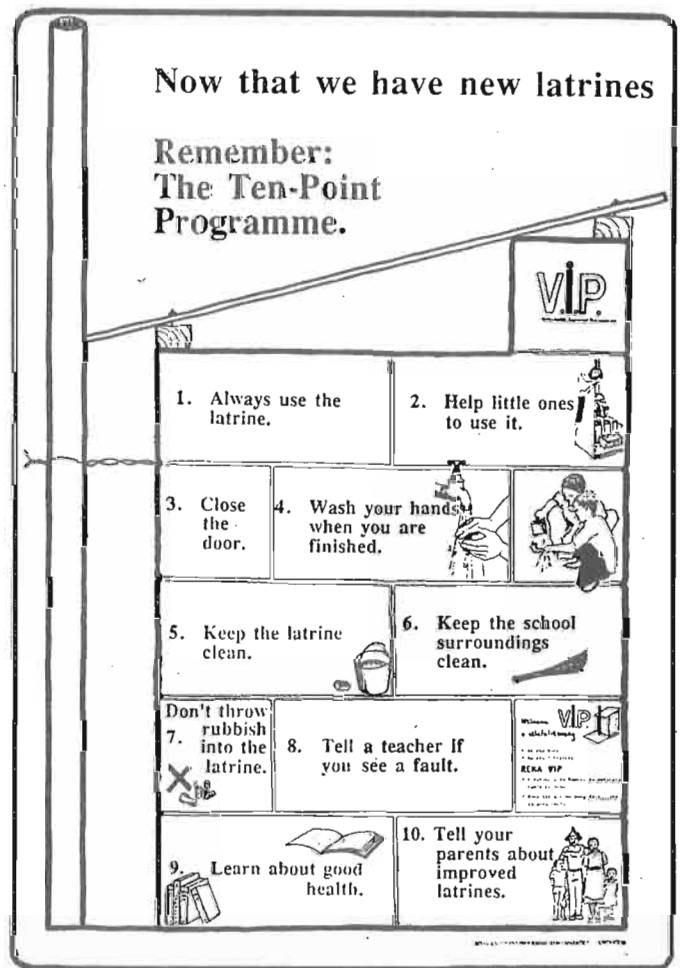


FIGURE 2: Ten-Point Programme (Normal Size A1) (Original in Sesotho)

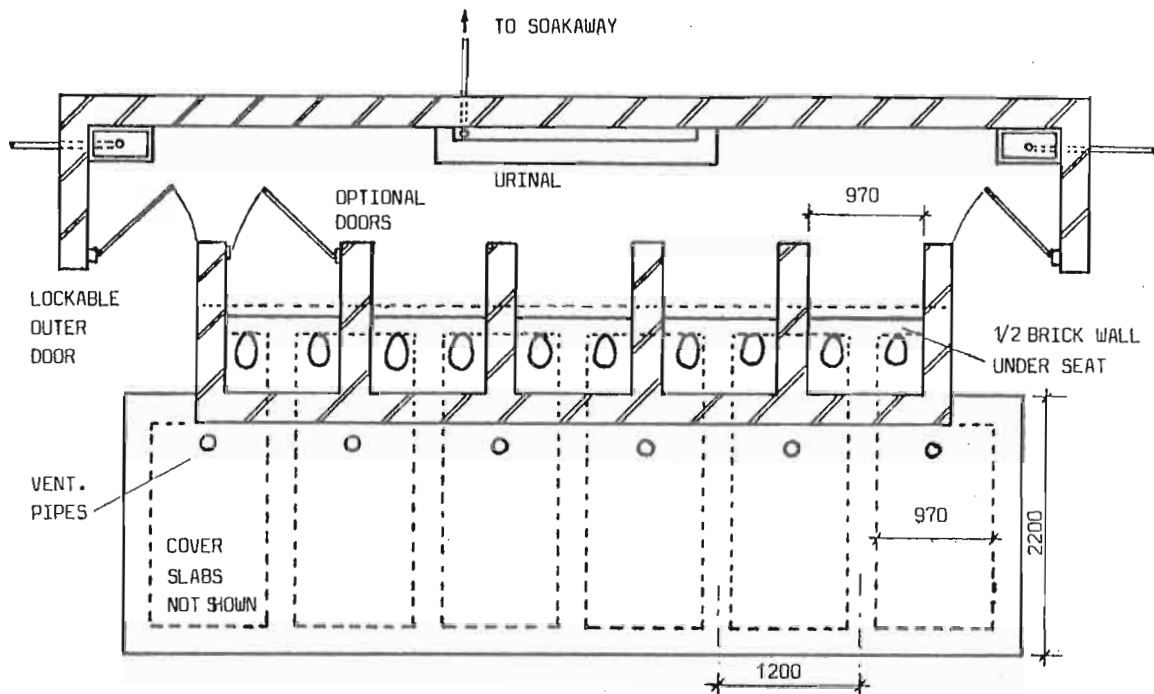


FIGURE 3: Multiple VIDP latrine for schools

WORKING PRINCIPLES OF VIDP LATRINES

11. Schools are normally advised to build multiple latrines of the type called VIDP (Ventilated Improved Double Pit) latrines. These have been found to be appropriate since their construction eliminates the need to dig very deep pits (Lesotho is very rocky) and there is no need to dig new pits when the first ones are full (see figure 3).

12. The working principle of a double pit (or alternating pit) latrine is that first one pit is used and when full it is closed to rest while the second pit is in use. When the second pit is nearly full, the contents of the first will have decomposed and can be emptied without danger from pathogens. The empty first pit can then be used again. The pits are designed to take at least 3 years to fill up.

PROBLEMS ENCOUNTERED

13. Some schools find it very difficult to raise the necessary funds to build the substantial structures proposed. We have tried offering cheaper designs but virtually all of the schools desire a permanent good-looking structure with low running costs. Even when external funding is arranged, it usually entails contributions from the community. These can sometimes take a long time to arrange, leading to intermittent construction and difficulties in supervision.

14. A number of technical problems have been encountered. Doors are a problem. They swell and do not close properly and are subsequently blown off by the wind. We advise schools to avoid them wherever this is acceptable. Urinals become blocked easily. Our latest design avoids the normal trap in favour of a grease trap/settlement tank (the size of a small manhole) before the soakaway. We have also had some ventilation problems. We prefer to use 150mm dia. PVC pipes but these are not readily available. The 100mm pipe works adequately most of the time but we receive occasional complaints.

15. Many of our problems are "institutional", for example:

- Local builders claiming to be able to read drawings and then proving that they cannot;
- Builders not present when the USIT supervisors visit the site (often over long distances);
- Builders, or other "responsible" parties, making unauthorised changes out of ignorance of the operating principles of a VIDP latrine;
- Poor co-ordination with an intermediary (eg. an architect) who produces a sub-standard product without further reference to USIT; An external agency (such as the World Bank, aided and abetted by the Ministry of Education) "gives" latrines to a school without securing the necessary commitments to maintenance, or budgeting for user education.

CONCLUSIONS

16. School sanitation may well have a good demonstration value as the pupils, in a learning atmosphere, come to understand the benefits of good sanitation and health. They could, in turn, have a positive influence on their older relatives to do the same at home. But if the same latrines have not been built well, are not properly used and maintained, and are a health hazard; this could have a very negative impact on the community and on the cause of sanitation as a whole. Our experience has taught us how important it is for the recipients of sanitation improvements to be committed to the proper use, care and maintenance of hygienic sanitation facilities, so that others might desire similar improvements.

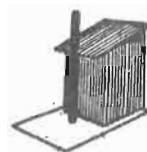
17. Any attempt at a schools sanitation project should be undertaken with extreme caution - as mentioned above, the results may be the opposite to what was intended. Project sponsors and implementing agencies should retain as much flexibility as possible. They should avoid "production targets" which might tempt project staff to pursue construction in preference to participation. Communities should be encouraged to come forward and demonstrate that they are sufficiently motivated to take part in the project (perhaps a set of demanding criteria will be needed); and user-education is essential.

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REFERENCES

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URBAN SANITATION IMPROVEMENT TEAM



MINISTRY OF INTERIOR
LESOTHO

USIT
Private Bag A41
MASERU
Lesotho