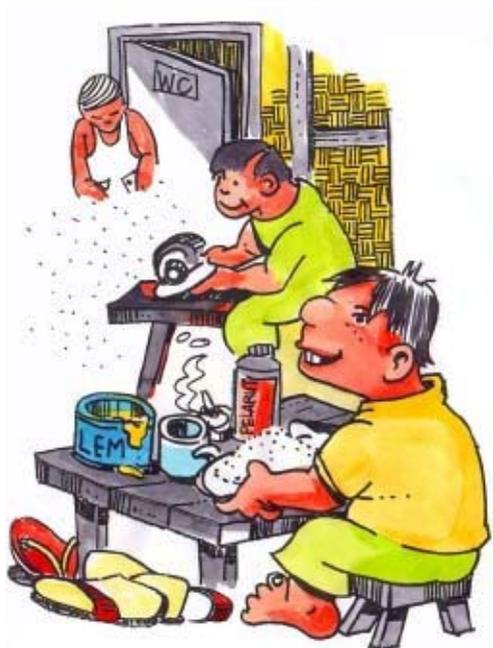


Improving Safety, Health and the Working Environment in the Informal Footwear Sector



Developed by:
ILO-IPEC Footwear Programme Team and Pia Markkannen



INTERNATIONAL LABOUR OFFICE

International Programme on the elimination of Child Labour (IPEC)
Programme to Combat Child Labour in the Footwear Sector in Indonesia

Improving Safety, Health and the Working Environment in the Informal Footwear Sector

PATRIS OPERATOR'S MANUAL (Participatory Action Training for Informal Sector Operators)

International Programme on the elimination of Child Labour (IPEC)
Programme to Combat Child Labour in the Footwear Sector in Indonesia

International Labour Office

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First published 2003

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ILO

Improving Safety, Health and the Working Environment in the Informal Footwear Sector, Jakarta, International Labour Office, 2003

ISBN 92-2-113521-7

Illustration coverpage: Yayat Ruhiat

Also available in Bahasa Indonesia: Meningkatkan Keselamatan, Kesehatan dan Lingkungan Kerja di Sektor Informal Alas Kaki (ISBN 92-2-813521-2), Jakarta, 2003

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Printed in Jakarta

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Preface

Participatory Action Training for the Informal Sector Operators (PATRIS)

Adapted PATRIS Guide to Improve Working Conditions in the Informal Sector Footwear Manufacturing

Purpose and background

Good business is composed of at least three features: safety, quality, and productivity; these features very much depend on one another. This adapted PATRIS tool guides and encourages owners and operators to initiate simple, effective, and low-cost action to improve working conditions in the informal sector shoeworkshops.

The PATRIS methodology was first initiated in Africa, by the International Labour Organization's (ILO) Interdepartmental Project on the Urban Informal Sector (1995-96). The contributions were made possible by an ILO/UNDP project on Urban Employment Promotion, carried out in Tanzania in 1997-1998. Now, this original PATRIS manual has been adjusted for the informal sector footwear manufacturing by the ILO's International Programme on the Elimination of Child Labour (IPEC).

The Guide is based on findings of the ILO-IPEC's Footwear Programme monitors in the local footwear workshops in the Cibaduyut area of Bandung, Indonesia. Since 1999, this Footwear Programme has been financially supported by the US Department of Labor. It represents and illustrates local work practices and experience in the Cibaduyut footwear community. The Guide is currently being translated into Bahasa Indonesia.

Preface

Besides PATRIS, this Guide also follows another methodology developed by the ILO: *Work Improvement in Small Enterprises (WISE)*. The Guide focuses on workplace hazards, preventive measures, and day-to-day management practices relevant to informal shoe workshops. These include: (i) exposure to chemicals, dust, noise, and heat; (ii) measures for proper lighting, housekeeping practices, and waste disposal; (iii) keeping the footwear workshop premises (e.g. roof, walls, floors, drainage, etc) in good order and protecting them from fire, heat, cold, and rain; (iv) material handling and work postures; (v) work organization issues; (vi) personal hygiene; and (vii) health promotion. The emphasis is on practical, low-cost and locally identified measures to improve working conditions and workplaces.

The adapted Footwear PATRIS Guide - based on the original PATRIS manual - was developed by the ILO-IPEC Footwear Programme in Bandung, Indonesia, and Pia Markkanen, Occupational Safety and Health Expert. The initiative was coordinated by Anna Engblom, ILO-IPEC Jakarta. For further information on this Guide, please contact the ILO-IPEC office in Jakarta: ipcejkt@ilojkt.or.id.

November 2003

Alan Boulton
Director
ILO Jakarta Area Office

Footwear Production

Footwear production

Shoemaking can comprise numerous process steps. A simplified production flowchart is illustrated in the below Figure 1.

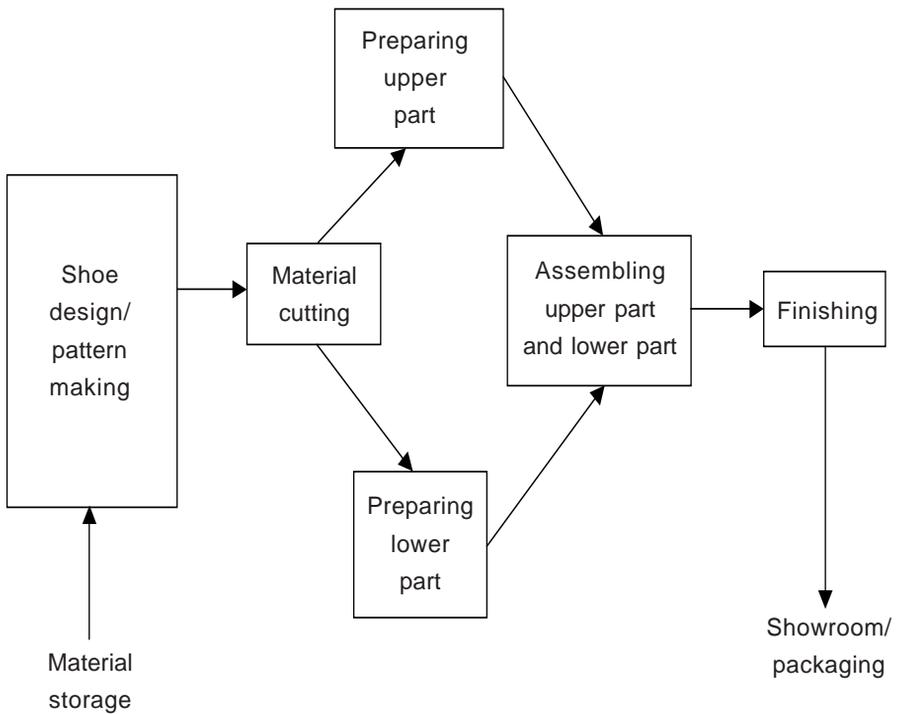


Figure 1:

Flowchart illustrating the major production steps in shoe production.

Source: Institute of Technology Bandung (ITB) and ILO-IPEC Footwear Programme.

Footwear Production

Often, a footwear is designed according to needs of customers. A model is drawn illustrating colours and details. An informal sector shoe manufacturer may have various models designed to market the products and finding potential new customers.

A pattern determines the shape and size of the footwear upper-part; this can be produced by the shoemaker or ordered outside. The upper-part style is drawn on the material (for example leather, polyurethane, PVC) according to the pattern, which is then cut with scissors.

After cutting, the outer area of the material is often thinned with a skiving machine. The uppers and linings are sewn together; eyeletting, button-holing, and decorating may be carried out. The uppers and lowers are assembled together primarily by gluing, but also by stitching, nailing, or screwing. Before assembling, the sole parts may be smoothed with a grinder. Those soles that are not ground are often treated with primer - a solvent-based chemical for cleaning and preparing for a more effective glue-bonding. Once glue has been spread on the sole part, it is heat-treated in an oven to further increase the bond strength. Then, a glue-assembled footwear is often compressed tightly with a pressing machine. Finishing may include such tasks as cleaning, polishing, waxing, colouring, and paint spraying. Finally, the footwear is packed into boxes or plastic bags and transported to the customer.

Physical Environment - Dust

1. Dust: remove dust, clean properly - don't spread dust

WHY

Footwear grinding machines produce a lot of leather, rubber, and textile dust. Other dust generating tasks include skiving and cutting operations. Any dust exposure is hazardous as dust can irritate or damage workers' lungs and upper airways. For example, leather dust exposure has been associated with nasal cancer.

Dust negatively affects machinery functions, thus, requiring more maintenance. It may also negatively affect the quality of raw materials and finished products.

HOW

- Introduce or improve local exhaust ventilation at the dust generating work station, in particular the footwear grinding work.
- Enclose or isolate footwear grinding or any other dust generating tasks.
- Clean regularly and implement rigorous daily housekeeping practice. Use water when cleaning. Do not spread dust.
- If the local exhaust ventilation is not possible, make use of wind direction and blowers to reduce exposure to fine dust.

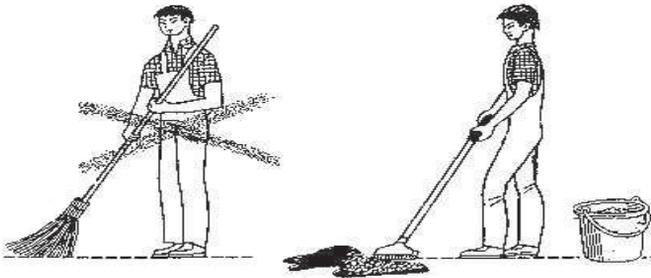


Figure 1.1:
Clean properly, do not spread dust. Figure source: original PATRIS manual.

Physical Environment - Dust



Photo 1.2:
Grinding operations produce a lot of dust in the shoe manufacturing. Photo source: ILO-IPEC Footwear Programme.



Photo 1.3:
A grinder equipped with a dust bag, guard to protect eyes, and seat was developed by the Bandung Technology Institute (ITB) in collaboration with the ILO-IPEC Footwear Programme.

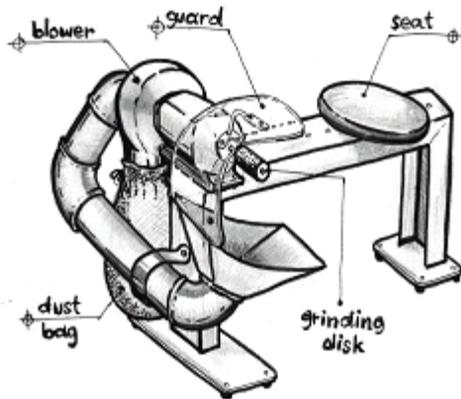


Figure 1.4:
Main parts of the shoe grinder illustrated in the Photo 1.3. Figure source: ITB and the ILO-IPEC Footwear Programme.

Physical Environment - Chemicals

2. Chemicals: protect workers from chemical hazards

WHY

In shoemaking, the serious chemical hazard exposure is mostly caused by organic solvents used in glues, primers, degreasers, cleaners, and paints. Vapours spread throughout the workshop - the solvent exposure is not only limited to gluing, cleaning, and polishing work. Footwear chemicals have serious long-term health effects that may manifest years afterwards: for example damages in the nervous system (e.g. intellectual capacity, memory problems, weakening of senses, etc), skin, liver, kidneys, lungs, immune system, etc. Incorrect disposal of chemicals harms the environment outside the workplace. Footwear chemicals are also flammable and represent a serious fire hazard. Keep them away from any ignition sources: burning cigarettes, open flames, sparks, etc.

All chemical containers should be adequately labelled indicating clearly ingredients used, manufacturer information, as well as safety and health precautions.

HOW

- Check that all chemical containers are properly labelled and material safety data sheets are provided for all chemical products. If not, inform the inspectorate and manufacturer about this.
- Seek possibilities to use safer, water-based chemicals instead of solvent-based ones. Introduce and improve local exhaust ventilation. Keep containers covered.
- Change the work method in order to reduce direct handling of hazardous materials. Rotate work tasks.
- Provide workers with and use suitable protective clothing and gloves to avoid direct contact with hazardous materials.
- If local exhaust ventilation is not possible, use fans and wind direction to reduce exposure.

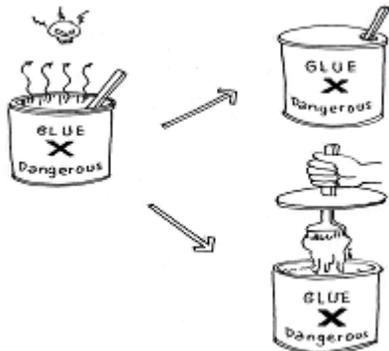
Physical Environment - Chemicals



Photo 2.1:

Footwear chemicals contain organic solvents that are hazardous to health (brain, skin, liver, kidneys, lungs, immune system). Photo source: ILO-IPEC Footwear Programme.

Keep chemical containers covered! Don't let hazardous vapours escape around the workshop.



Children should not be working with footwear chemicals !



Photo 2.2:

Often, shoe workshop owners buy raw materials from small shops. Footwear chemical containers are rarely properly labelled and no material safety data sheets (MSDSs) are provided. Adequate labels and MSDSs are fundamentals of chemical safety - sources for workers and for the community to receive necessary information. Photo source: ILO-IPEC Footwear Programme.

Figure 2.3:

Gluecan with a holed cover for glue spreading brush to reduce vapours. If openings and closings happen often, the cover can be attached with the brush. Figure source: ITB and ILO-IPEC Footwear Programme.

Physical Environment - Noise

3. Noise: make sure that noise does not harm workers

WHY

The high noise levels created by machines can damage the hearing. It can also affect the health of workers in other ways, for example creating high blood-pressure, headaches, nervousness, and stress.

Noise can interfere with warning shouts, signals, and communication. This can cause accidents and affect production quality. If workers standing at arm's length from each other cannot talk in a normal voice tone, the noise level is too high. In the footwear workshops, some sole pressing machines, hammering, and grinding can create high noise levels. In larger footwear factories, noise level is usually high due to the use of various machines.

HOW

- Reduce noise at the source by using properly designed, maintained, and adjusted tools or machines.
- Screen or isolate the noise source as much as possible.
- Reduce noise reflection by raising the ceiling or using sound-absorbing materials.
- As a last resort, use ear muffs or ear plugs when necessary.

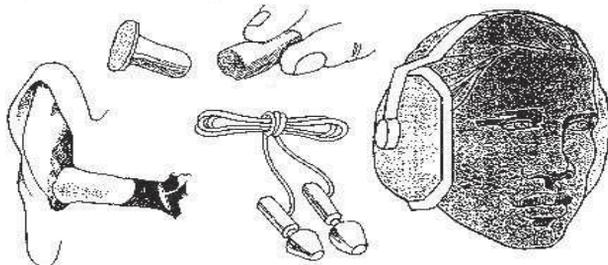


Figure 3.1:

Earplugs and earmuffs are the last resort noise control measure.

Figure source: original PATRIS manual.

Physical Environment - Heat

4. Heat: protect the workers from excessive heat

WHY

Heat influences working capacity and decreases productivity. It increases fatigue, thus, human errors and accidents. Heat-related health hazards include dehydration, heat exhaustion, cramps, and rash. Especially in a tropical climate, it is important to provide available means of protection against excessive exposure to heat. In the shoe workshops, try by all means possible to keep indoor temperature lower than 30⁰C which is already a very uncomfortable working environment.

HOW

- Increase natural ventilation by having more openings, windows, or open doorways.
- Insulate or screen heat-producing objects, machinery or equipment.
- Use ventilators or fans to have good air flow.
- Remember that trees, bushes, and flowers can help in reducing the harmful sun radiation, hot winds, and create a more pleasant environment at the same time.

Physical Environment - Heat

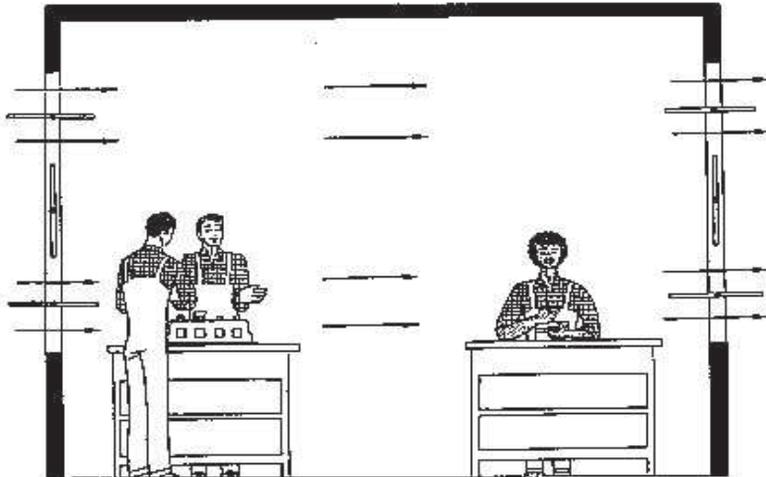


Figure 4.1:
Natural ventilation by openings at the both side of a room. Figure source:
Higher Productivity and Better Place to Work (hereinafter ILO WISE-manual).



Photo 4.2:
Shoe workshops can be very small, lots of workers cramped into a limited space without ventilation. Photo source: ILO-IPEC Footwear Programme.

Physical Environment - Lighting

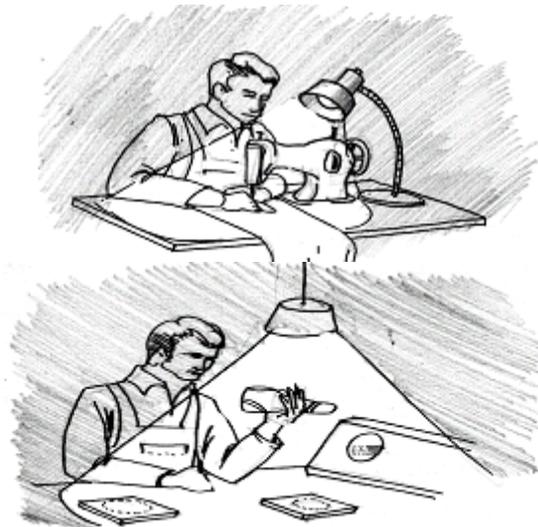
5. Lighting: increase lighting to improve quality and prevent accidents

WHY

Sufficient lighting improves workers' comfort and performance, making the workplace a pleasant place to work. It also reduces work errors, thus, improves quality. Additionally, poorly lit or dark places cause accidents, especially when materials are being moved.

HOW

- Maximise the use of daylight with: (i) properly located machines and work stations, (ii) higher roof and bigger windows, and (iii) installation of skylights (e.g. with translucent plastic sheets).
- Clean regularly windows and maintain lamps and other light sources regularly.
- Eliminate glare or reflections which strain the workers' eyes.
- Improve general artificial lighting or provide spot lighting.



Figures 5.1 and 5.2:
Examples how to provide proper lighting at shoe workshops. Figure sources: ITB and ILO-IPEC Footwear Programme.

Physical Environment - Housekeeping

6. Housekeeping: remove all unnecessary items and provide a proper place for everything

WHY

When the workplace is free from clutter, work proceeds safely and comfortably. Valuable space will be free of obstacles and workers can easily find the right tool for the job. When the workplace is in good order there is less fire and accident hazards. An orderly workplace leaves a good impression on your clients.

HOW

- Remove all unnecessary items from your workplace.
- Assign daily or more frequent responsibility for clean-up to specific workers for specific areas.
- Provide convenient places and storage racks for tools, raw materials, parts and products.
- Keep paths and aisles clear and wide enough to allow proper transport.



Photo 6.1:

Daily housekeeping practice is necessary. An orderly workshop, as demonstrated in this photo, leaves a good impression on your clients. Photo source: ILO-IPEC Footwear Programme.

Physical Environment - Waste Disposal

7. Waste disposal: establish a good waste disposal system

WHY

Waste, scrap, and liquid spills on the floor not only represent a material loss and work obstacle, but are also a significant accident cause. Conveniently placed, easy-to-empty waste containers help in housekeeping and creates free space.

HOW

- Provide enough waste containers of adequate size.
- Establish regular system for removing waste out from the workplace.
- Specify clear responsibilities for waste disposal.



Photo 7.1:

Waste mountain outside of a shoeworkshop. Proper waste management practices enhance community well-being as well. Photo source: ILO-IPEC Footwear Programme.

Premises - Roof

8. Roof: protect your workers and products from outside heat and rain

WHY

For workers health, well-being, the correct temperature and humidity inside the work premises is important. A proper roof can protect from direct and indirect heat-up effect of sunlight. When it rains and if the roof is not in the good condition, there is a risk to damage materials and products.

HOW

- Improve roof to give protection from the sunlight and rain.
- Raise the roof to increase natural indirect lighting and ventilation in work premises.

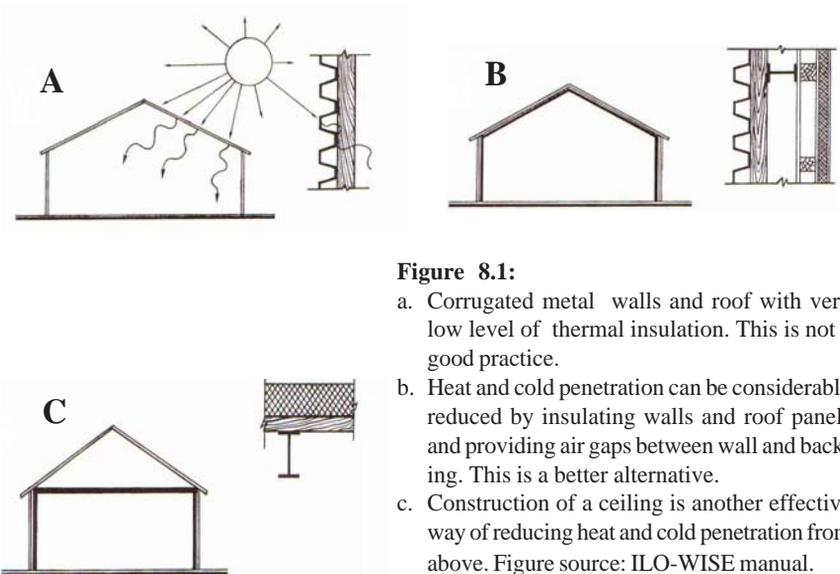


Figure 8.1:

- a. Corrugated metal walls and roof with very low level of thermal insulation. This is not a good practice.
- b. Heat and cold penetration can be considerably reduced by insulating walls and roof panels and providing air gaps between wall and backing. This is a better alternative.
- c. Construction of a ceiling is another effective way of reducing heat and cold penetration from above. Figure source: ILO-WISE manual.

Premises - Floor and Drainage

9. Floor: improve your workshop floor for productive and safe work

WHY

Inappropriate floor surfaces or poorly maintained floors can be a major source of accidents, work interruptions, and product damage.

HOW

- Improve your floor for better strength and resistance to wear and abrasion.
- Keep floors clear from obstacles.
- Keep floors in good condition to avoid accidents and damages for workers, materials, and products.

10. Drainage: improve drainage system to keep your workplace dry and clean

WHY

A good drainage system is important to keep work premises dry, achieve good hygiene, reduce the incidence of infectious diseases, and avoid accidents.

HOW

- Provide for proper waste water drainage outside work premises and remember that it should only be used as a passage for water disposal.
- Provide a rain water drainage system.
- Keep the drainage clean and clear on a regular basis.

Premises - Fire Prevention

11. Fire prevention: protect you business from fire accidents

WHY

Fire prevention is the best insurance against fire accidents. When fire occurs, it often causes deaths, significant material damage, thus, major financial loss.

HOW

- Keep premises in good order by housekeeping.
- Acquire basic fire-fighting equipment, for example fire extinguisher, water bucket, and blankets.
- Train workers in fire prevention and fighting.
- Check that all electrical appliances are properly insulated.
- Provide proper storage for flammable chemicals and other materials, such as: all solvent-based footwear chemicals, fuels, and gases. Keep them away from ignition sources.

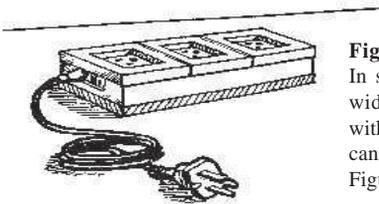


Figure 11.1:

In shoe workshops, extension cords are widely used and they are often loaded with various electrical appliances. These can be sources of sparks and cause fire. Figure source: original PATRIS manual.

Figure 11.2:

This workstation in a shoe workshop implies serious fire hazards. Housekeeping practice is non-existent. Cigarette smoking is rampant in many workshops, even when using glues. Figure source: ITB and ILO-IPEC Footwear Programme.



Ergonomics - Lifting, Carrying, and Moving

12. Lifting, carrying, and moving: do not break your back

WHY

Heavy lifting and wrong lifting methods cause fatigue and back injuries. This can cost you a great deal, as you may lose working ability for a long period.

HOW

- Train workers to use their legs rather than their backs when lifting.
- Raise and lower materials slowly in front of the body without twisting or deep bending.
- Instead of lifting or carrying heavy weights, divide them into smaller packages, containers, or baskets which allow a use of power grip, instead of pinch grip, when handled manually.
- Use carts, hand trucks and other wheeled devices or rollers when moving heavy materials.
- Combine lifting with physically lighter tasks to avoid injury, fatigue, and to increase efficiency. Rotate work tasks.

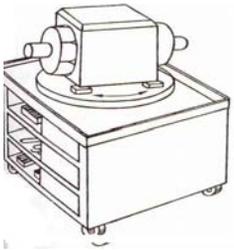


Figure 12.1:

A mobile assembly work-stand equipped with a rotating top and storage for tools, and parts. Figure source: ILO-WISE manual.

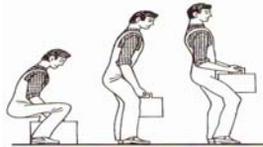


Figure 12.2: Right lifting method.

1. Keep feet far enough apart to give a balanced distribution of weight.
2. The knees and hips should be bent, the back kept as straight as possible.
3. The arms should be held as near to the body as possible. This helps sustain the load by allowing friction between the load and clothing.
4. Lift should be made smoothly, no jerks or snatches should occur. Figure source: ILO-WISE manual.

Ergonomic - Hazardous Postures and Seats

13. Hazardous postures: bad postures decrease efficiency and comfort

WHY

When work is done in a natural posture, with weight on both feet and without bending or twisting, this produces less fatigue and higher productivity. Arrange for good hand positions to allow a natural posture.

HOW

- Avoid strenuous work or prolonged unnatural working postures.
- Avoid work requiring high hand positions for standing workers by providing foot stands or platforms.
- Put materials within easy reach of workers, using racks if necessary.
- Assign work tasks to create opportunities to alternate between standing and sitting postures.

14. Seats: provide good seats for everybody

WHY

Seated work seems comfortable compared with other forms of work. However, sitting for long hours is also tiring. Good seats with a proper and sturdy backrest reduce fatigue and increase job satisfaction.

HOW

- Provide chairs or benches of the correct height or make seats height individually adjustable.
- Choose the seat surface and/or provide a cushion for comfort and support.
- Provide chairs with backrest of proper size which provides low back support.

Ergonomic - Hazardous Postures and Seats

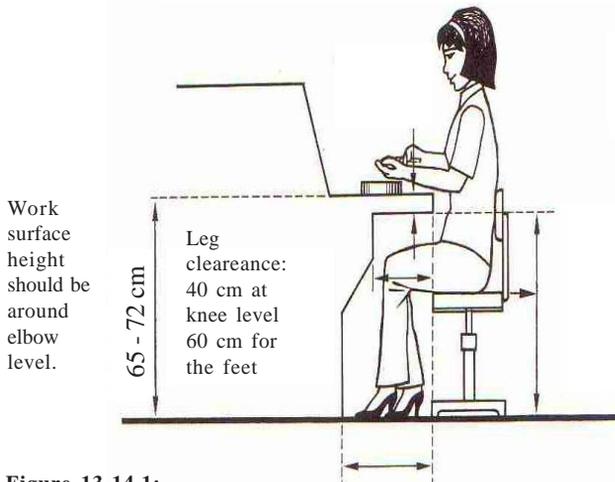


Figure 13-14.1:

Recommended dimensions for most seated tasks. If possible use an adjustable chair with a good backrest. Figure source: ILO-WISE manual.



Photo 13-14.2:

Squatting on the floor is an example of an awkward posture. This is common in shoe workshops and can result in leg and knee injuries. Photo source: ILO-IPEC Footwear Programme.



Photo 13-14.3:

In this shoe workshop, workers used to sit on benches. Simple adjustments were made by making these benches more comfortable to sit with a backrest. Photo source: ILO-IPEC Footwear Programme.

Ergonomic - Working Surface

15. Working surfaces: provide a stable work surface at each workstation

WHY

Work consists of a variety of tasks. A stable work surface that allows the work to be carried out on a elbow height is needed. Too narrow or unsteady surface results in time loss and more effort, thus reducing work productivity and increasing fatigue.

HOW

- At each workstation, provide a stable work surface of an appropriate size.
- Avoid a narrow or unsteady surface.
- Avoid bending postures for standing workers by raising the height of equipment, controls, or work surfaces.
- Provide work tables of suitable height for seated workers so that too high or low hand positions and bending postures are avoided.

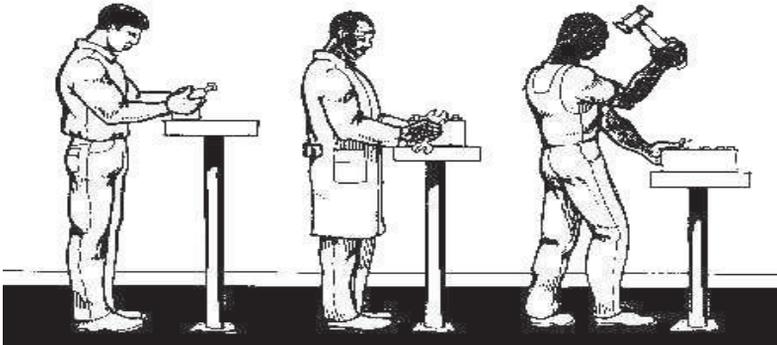


Figure 15.1:

Assembling shoe uppers to lowers at the elbow level, allowing both sitting and standing positions, increases workers' well-being and productivity. Figure source: ILO-WISE manual.

Ergonomic - Work Tools

16. Work tools: a safe and ergonomic tool is a productive tool

WHY

Tools adapted to the particular operation and well-maintained are safe to use. When cutting tools are kept sharp, less force is required to use them. **Children should not be working with sharp tools.** Large and softer handles in footwear tools such as knives, scissors, and tongs are more comfortable to work with. An uncomfortable tool with small and hard handles (e.g. wooden or metal) is unergonomic and less productive.

Vices and clamps reduce accidents, as they prevent slippage of material, reduce the need for maintaining a bad posture and provide better control over the work item and tools.

HOW

- Use safe power tools and make sure that safety guards are used.
- Choose tools of appropriate size and shape for easy and safe use.
- Improve tools or use locking devices to reduce gripping or handling force.
- Provide a “home” for each tool.
- Make sure that tools are maintained and repaired and that no worn-out tools are used.



Photo 16.1:
In shoe workshops, cutting tools like knives and scissors are frequent sources of cuts and other injuries. Photo source: ILO-IPEC Footwear Programme.



Figure 16.2:
Skiving machine for material thinning. Moving machine parts, like the belt in this skiver, should be properly guarded or enclosed. Figure source: ITB and ILO-IPEC Footwear Programme.

Welfare Facilities - Toilets

17. Toilets: make sure that toilet facilities serve their purpose

WHY

Well-maintained toilets meet some of workers' most essential needs. Conveniently located toilet facilities also save working time. Sufficient, clean, and well-maintained toilets is a must in all decent workplaces.

HOW

- Provide sufficient toilet facilities close to the working area.
- Provide sufficient separate hand washing facilities with soaps or hand cleaners.
- Ensure that toilet and hand washing facilities are regularly cleaned and in good sanitary conditions.
- If possible, provide separate toilet for men and women. If not, ensure workers' privacy when using the toilet.

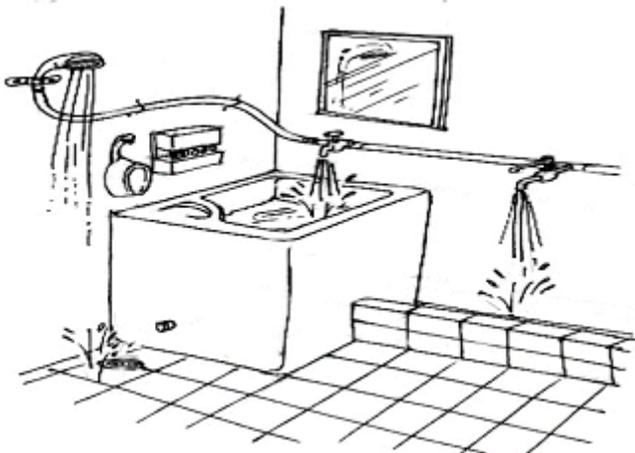


Figure 17.1:

Clean and well-maintained toilet and wasing facilities are the face of your workplace and improve workers' satisfaction. Figure source: ITB and ILO-IPEC Footwear Programme.

Welfare Facilities - Washing

18. Washing facilities are essential for hygiene and health

WHY

Washing facilities that are conveniently located and regularly used, help to prevent chemicals from being absorbed through the skin or being ingested during snacks and meals. Well-maintained washing facilities have also positive effects for work satisfaction.

HOW

- Check that sufficient, clean, and well-maintained washing facilities are near the worksite.
- When you rearrange or build again your workshop, provide good washing facilities to ensure hygiene and tidiness.
- Maintain and clean up washing facilities or showers properly.

Welfare Facilities - Drinking Water

19. Drinking water: drinking water is essential for health

WHY

Good drinking facilities can do much to prevent fatigue and maintain workers' health. Especially in a hot environment, work results in considerable loss of water. This can affect both the workers' health and productivity if clean drinking water is not available.

HOW

- Provide proper facilities for drinking water near the work area.
- Ensure that there is always safe drinking water available and that the water cannot be contaminated by dust, chemicals, or dirt for example spread by insects.

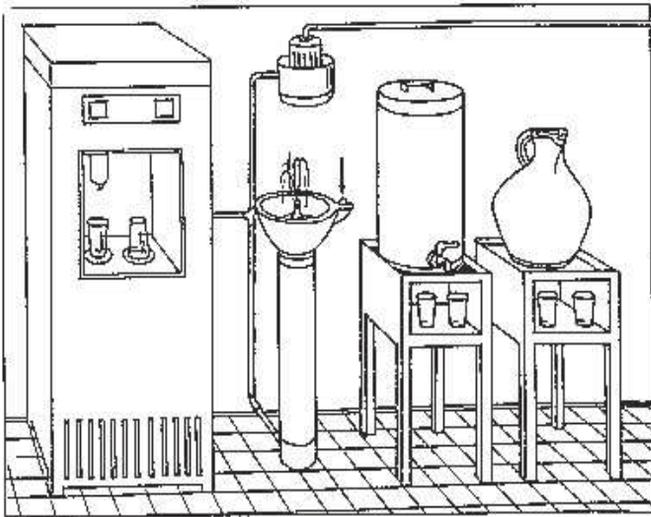


Figure 19.1:

Drinking water is essential for health. Figure source: original PATRIS manual.

Welfare Facilities - Food Hygiene

20. Food hygiene: good hygiene is important for work and health

WHY

Shoe manufacturers spend a substantial part of their everyday life at the workplace. They need to drink, eat, and take a rest. Clean and hygienic cooking facilities and eating areas are essential. Eating, drinking, and smoking in the work process areas is dangerous and can result in ingestion of hazardous chemicals and dust.

HOW

- Ensure that the food is always prepared in a clean and hygienic place.
- Provide a separate area for meals near the work area, but away from the workstations.
- Keep washing facilities clean to ensure food hygiene.

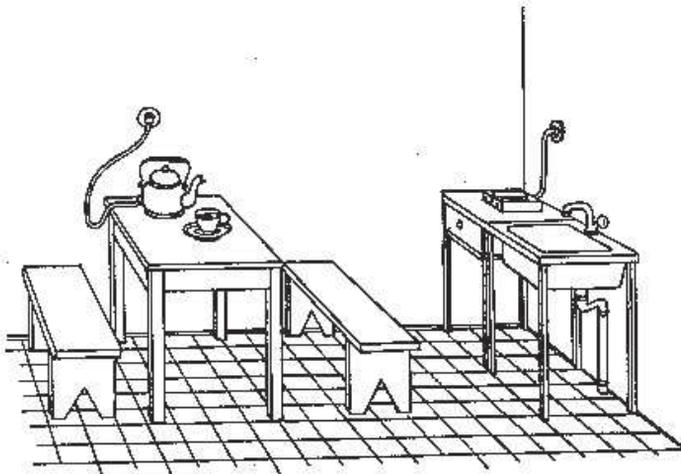


Figure 20.1:

Proper cooking facilities for good food hygiene. Figure source: original PATRIS manual.



Photos 20.2 - 20.3:

Drinking, eating, and smoking at the shoemaking workstations is dangerous and leads to ingestion of hazardous chemicals and dust. Provide proper facilities for eating, drinking, and taking a rest, which is shown in Figure 20.1. Photo sources: ILO-IPEC Footwear Programme.

Personal Protective Equipment

21. Personal protective equipment (PPE): provide PPE that gives adequate protection

WHY

For hazards which cannot be eliminated or reduced by engineering controls or by administrative controls, appropriate PPE must be selected and used. Each type of PPE is designed to protect certain parts of the body (e.g. hands, feet, eyes) and only against certain hazards.

HOW

- Provide adequate number and appropriate types of protective goggles, face shields, masks, earplugs, finger cups (when using a needle), safe footwear, and gloves.
- Ensure regular use of PPE through adequate instruction and training.
- Ensure that all PPE is easily available, well-maintained, and its use is regularly monitored.
- Clearly mark areas requiring the use of PPE.
- Remember that PPE is always a last resort control measure. Replace PPE with local exhaust ventilation, built-in guards, isolating hazards, or other engineering hazard control measures whenever possible.

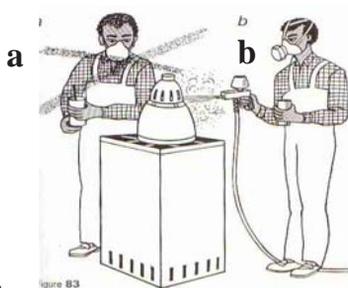


Figure 21.1:

A common dust filter for inert dusts, as shown in (a), cannot be used as protection against vapours. A respirator with changeable filter for vapours and dangerous dusts, as shown in (b), should be used. Figure source: ILO-WISE manual.

Work Organization - Work/Rest Cycles

22. Work/rest cycles: take frequent short pauses to avoid fatigue and to work with renewed energy

WHY

Prolonged work leads to fatigue and raises the accident risks. Short rest pauses can improve concentration and increase work quality and productivity. Taking short breaks at relatively short intervals (say five minutes in every hour) is better than taking a long break after the worker reaches a stage of excessive fatigue.

HOW

- Avoid daily or weekly working hours which are too long (about eight hours in a day is recommended).
- Consider taking short breaks in addition to a long break for meals.
- Take short, spontaneous pauses during the working period.



Photo 22.1:

Short sport activities during the workday can renew the workers' energy and spirit. Photo source: ILO-IPEC Footwear Programme.

Work Organization - Skills Development and Training

23. Skills development and training: provide opportunities for workers to learn new skills and work tasks

WHY

By training workers in new skills, it is easier to organize new work systems which are productive and safer. By acquiring new skills, workers can do multiple jobs. In this way, job rotation can be more easily organized and absent workers more easily replaced, without looking for additional workers. Task enlargement and job enrichment lead to a greater worker motivation and well-being.

HOW

- Improve job content by training workers to do maintenance, adjustment, and task planning in addition to their routine manual work.
- Train workers to do multiple job tasks.
- Ensure that workers are trained about safety and health hazards as well as protective measures.



Figure 23.1:

Workers need training and information about safety and health hazards at their workplace. Figure source: original PATRIS manual.

Work Organization - Interaction and Communication

24. Interaction and communication at work: good communication has many positive effects

WHY

Well-planned work provides opportunities for workers to communicate with other workers without leaving their work station. This stimulates the workers without interrupting work. Interaction in work has positive effects on job satisfaction and problem solving.

HOW

- Provide opportunities for workers to talk with each other while they are working.
- Avoid layouts or job assignments which require work in isolation.
- Provide workers with frequent feedback on the quality and quantity of their work.

Health Promotion - Safety and Health Committee

25. Safety and health committee: safety and health can be improved by the the committee

WHY

An occupational safety and health (OSH) committee can be an effective medium in exchanging ideas on how to make the working environment safer and healthier. The committee can be established both at the workplace and the community level. In Cibaduyut, the community-based OSH committee has been set up to advocate OSH measures and monitor child labour in the footwear industry.

HOW

- Members of an OSH committee are nominated by the workers or community members.
- An OSH committee members should represent different parts of the workplace. A community-based committee should represent members from different villages.
- A committee should meet regularly (for example twice a month) and be responsible for organizing safety and health activities.
- A committee is an important contact point for the Government officers who are responsible for safety, health, and environmental issues.



Figure 25.1:

An OSH committee can be a medium to improve the work environment and advocate safety and health measures. Figure source: original PATRIS manual.

Health Promotion - First-aid

26. First aid: first-aid skills are essential at any workplace

WHY

Even if safety and health measures are well organized in a workplace, there is still always a possibility for an accident. If an accident happens, loss can be minimized by quick corrective actions. First-aid is the first skilled assistance given to an injured or sick person before taking the victim to the hospital for medical treatment.



HOW

- Ensure that there is at least one trained first aider in every workplace.
- Provide an adequately furnished first-aid box.
- Ensure that workers have an easy access to medical care, if necessary.

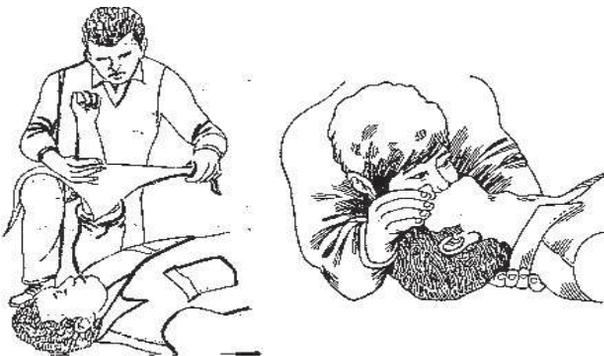


Photo 26.1:

Have at least one trained first aider at the shoe workshop. Figure source: original PATRIS manual.

Health Promotion - Health Services

27. Health services: well-organized health services are important for workers' well-being

WHY

Protecting the workers against any health hazards which may arise in or out of the workplace can be done only by professional occupational health personnel.

HOW

- Establish a regular system for identifying and controlling work hazards and to protect workers' health.
- Establish a record keeping of accidents and diseases in the workplace or in the community, for example, through the OSH committee.
- The OSH committees should seek professional advice from health services on occupational health issues. Cooperation between the OSH committee and health professionals is essential.



Photo 27.1:

At hazardous occupations such as shoe manufacturing, a regular periodic health examination of workers is necessary. Photo source: ILO-IPEC Footwear Programme.

Walk-through Forms - References

Walk-through monitoring forms

The ILO-IPEC Footwear Programme monitors adapted the original PATRIS checklist to be used in the informal sector shoe workshops in Cibaduyut. The data collected during workplace visits are regularly added to the monitoring database. The data are being used to follow the gradual improvements of working conditions in the individual workshops.

The adapted walk-through monitoring form for the footwear sector can be found on the next page.

References

Besides the experience of the ILO-IPEC Footwear Programme in Bandung, these seven sources were the key references when developing this adapted PATRIS Footwear Guide:

1. *Improving Safety, Health and the Working Environment in the Informal Sector Participatory Action Training for Informal Sector Operators (PATRIS)*, Operators Manual; the ILO; Geneva, March 1999
2. *Health and Safety Training the Trainers Workshop, in Jakarta, Indonesia, 3-7 Feb 2002*; Maquiladora Health and Safety Support Network; Labor Occupational Health Program of the University of California, Berkeley
3. *Safety, Health and Working Conditions: A Training Manual*; Joint Industrial Safety Council; the International Labour Office (ILO), Stockholm; 1987
4. Thurman JE, Kogi K; Louzine AE; *Higher Productivity and a Better Place to Work*; Action and Training Manuals; 1988
5. Conradi FL.; Portich P.; Footwear Industry; in the ILO Encyclopaedia on Occupational Health and Safety; Stellman, J. (Ed); the Fourth Edition, Vol. 3; Pages 88.1-88.12; International Labour Organization (ILO); Geneva; 1998
6. Ergonomics: Study of Work; US Department of Labor, Occupational Safety and Health Administration; 2000

Adapted PATRISOSH Monitoring Form for the Footwear Manufacturing Workshops

Monitoring Date: _____

Workshop ID Code: _____

Monitoring Item	Score (0 to 2)	Observations/changes
Physical environment		
1. Dust		
2. Chemicals (labels & MSDS, storage, ventilation)		
3. Noise		
4. Heat		
5. Lighting		
Premises		
6. Fire Prevention		
7. Material storage and handling		
8. Housekeeping/general order and cleanliness		
9. Waste disposal		
10. Roof		
11. Walls (sticking sharp objects)		
12. Floors/stairs/staircases		
13. Drainage sewage systems		
Welfare facilities		
14. Toilets		
15. Showers		
16. Rest/sleep/eating/smoking areas		
17. Drinking water		
Ergonomics		
18. Hazardous postures		
19. Seat		
20. Working surfaces		
21. Lifting		
Equipment		
22. Tools, machines, equipment		
Work organization		
23. Interaction with workers		
24. Work rotation		
25. Work-rest cycles		
Personal protective equipment		
26. Shoes, gloves, aprons, masks, goggles, etc.		
Day-to-day management		
27. First aid		
28. Health services		
29. Delegation of safety responsibilities to workers		
Total Scores		

Scoring : 0 - major improvement needed; 1 - improvement needed; 2 - satisfactory