
9. Training and registration of plumbers

Plumbing is a craft calling for technical knowledge as well as manual skills. A national plumbers' guild or similar appropriate institution can approve standard methods for different plumbing practices as a basis for training and for examination and certification of plumbers.

Training programmes must ensure that both theoretical and practical aspects are fully covered. Most plumbing training systems specify two levels of achievement. The first of these describes a person who has gained the knowledge and demonstrated the skills necessary to work independently without supervision, usually designated a journeyman or journeywoman. The second is a master plumber, a designation applied to those who have completed a number of years as a journeyman, and who have demonstrated a superior level of skill and understanding in the profession. A master plumber is deemed competent to supervise apprentices and to oversee major construction projects that include the installation of highly complex systems. Master plumbers also may work as inspectors for local government authorities. Many countries have formal accredited training programmes for those wishing to gain the title of master plumber. In many developing countries, where the formal education system offers limited opportunities for the designation of master plumbers, it is fundamental that the water authorities themselves make an effort to support the establishment of schools for plumbers conducive to the formation of this type of professional.

9.1 Training prior to admission to the plumbing trade

In most developed countries, training for admission to the trade is either through formal apprenticeship lasting four to seven years, or through training at a post-secondary institution, such as a community college or technical college. When training in plumbing is provided by a college or other tertiary institution, a diploma or certificate may be awarded when a student completes the required course of study. However, while knowledge acquired from textbooks and lectures is important, it alone does not fully prepare an individual for the demands of the plumbing workplace. Those knowledge-based programmes must be coupled with effective on-the-job training in the field, under the supervision of a fully qualified and experienced plumber (usually a master plumber).

9.2 Licensing and registration

Training programmes, whether apprenticeship or college based, are generally designed to prepare journeymen or journeywomen to successfully meet local licensing, registration or certification requirements. The granting of a licence is recognition of the ability of the person to carry out satisfactory plumbing work without supervision. Where it is a legal requirement to be licensed, registered or certified, the licensing authority has the power to suspend or revoke a plumber's licence for cause. This provides an important incentive for a licensed plumber to maintain good standards of performance and to avoid breaches of the local code of practice. Plumbers may also be asked to provide evidence of good character and reliability before they are licensed. Plumbers may also be required by the licensing authority to provide a deposit or some form of indemnity or performance bond to cover the cost of repairing defective work before a licence is granted.

In some countries a unit of the national government, such as the public works department or the national water board, takes responsibility for all aspects of training and registration. In these cases, the relevant ministry conducts training courses, holds examinations and maintains a register of qualified plumbers ranked according to both practical and theoretical experience. Plumbers who are listed on the register are not required to take further technical examinations to obtain a licence to practise their trade. When training is based upon an apprenticeship system, the apprenticeship programme should be accredited and monitored by an appropriate third party or by a state or national apprenticeship agency. The third party may be a national sanitation or health organization, a building research institute, a trade union or a professional society.

Some countries do not regulate the activities of plumbers by law. This lack of regulation and oversight may contribute substantively to poor plumbing, especially in developing countries.

9.3 Establishing a training programme

The first challenge in setting up a new formal training programme in a city or country where no such programme has existed is the recruitment of qualified and experienced individuals to help design and establish the training and certification programmes. This may involve the importation of well-trained plumbers from outside the local area or from nearby nations. The first training programmes can be set up on a small scale, and these pilot programmes can later be expanded to meet the needs of the region. Numerous models for these training programmes exist and they can be the basis for the programme targeted to a specific jurisdiction.