➤ ***David Magee* discusses the correlation** between low levels of literacy, internationally and within the UK, and workplace accidents, ill health and financial losses.

Literacy is the ability to read, write and understand a particular language. It is the foundation of our education system. Within the workplace there are subject or industry specific literacies such as health literacy, financial literacy, computer literacy and OSH literacy.

OSH literacy can be defined as: "the degree to which individuals have the capacity to obtain, process, produce and understand basic occupational safety and health information needed to make appropriate decisions regarding health and safety at work[1]."

Like finance, health and IT, occupational safety and health has its very own subject-specific meta-language, including signs, symbols, shapes and colours. It can become even more specialised and specific depending on the industry sector.

OSH literacy is important because:

- internationally[2], every 15 seconds a worker dies from a work-related accident or disease and 153 workers have a work-related accident;
- globally, an estimated 2.3 million people die every year from (reported) work-related accidents and diseases, and about 160 million people suffer from work-related diseases;
- worldwide, there are 313 million (reported) non-fatal accidents;
- the suffering caused by such accidents and illnesses to workers and their families is incalculable. In economic terms, the International Labour Organization (ILO) has estimated that more than 4% of the world's annual GDP is lost as a consequence of occupational accidents and diseases[3].

In Great Britain, HSE statistics[4] report:

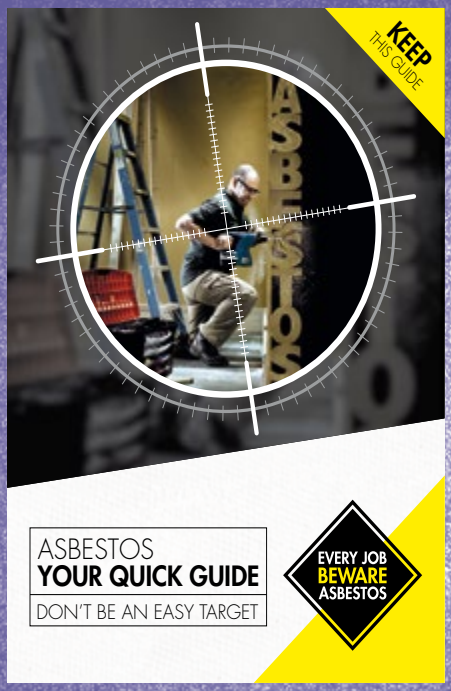
- 1.2 million people suffering from a work-related illness (in 2013/14)
- 142 workers killed at work (2014/15)
- 78,000 other injuries to employees reported under RIDDOR
- 28.2 million working days lost due to work-related illness and workplace injury
- £14.2 billion estimated cost of injuries and ill health from current working conditions (2012/2013)

Although the literacy skills of workers and trainees is not the only reason for injuries, deaths, disease, accidents and financial losses occurring in the workplace, research has shown that there is a very real link. For example, in 2012 the World Literacy Foundation published a report on the economic and social cost of illiteracy. It found that "employees with poor literacy are more likely to have accidents…This puts themselves and their co-workers at risk, increases the need and cost for medical services, leading to higher absenteeism and damages long-term productivity"[5].

In the UK there are a significant number of adults who have literacy issues. For example, around 5.2 million adults in England can be described as "functionally illiterate" meaning they have literacy levels at or below those expected of an 11-year-old. At this level, "people can understand short straightforward texts on familiar topics accurately and independently, and obtain information from everyday sources, but reading information from unfamiliar sources, or on unfamiliar topics, could cause problems. Many areas of employment would not be open to them with this level of literacy and they may also struggle to support their children with reading and homework, or perform other everyday tasks"[6].

To add to the problem, research has shown that people with low levels of literacy tend to find employment in high-risk industries such as construction, transport, manufacturing, agriculture and fishing. These industry sectors also tend to attract more men than women, and research has shown that, in general, in 'developed' countries, men have lower levels of literacy than women. But even within these industry and gender sectors there are disparities. ➤

> "...people with low levels of literacy tend to find employment in high-risk industries..."



HSE has produced the reference card and 'easy read' health and safety law leaflet above. Download from www.hse.gov.uk/Asbestos/assets/docs/beware-asbestos-reference-cards.pdf and www.hse.gov.uk/pubns/books/laweasyread.htm

Furthermore, a lot of the statistics and research on literacy levels do not look in-depth at other literacy issues such as adults in the workplace who may have a different first language than that in their place of work, eg. migrant workers. Nor do they include consideration of other barriers to obtaining and understanding risk communication such as cognitive, auditory and vision impairment issues. For instance, the British Dyslexia website states that 10% of the population are dyslexic, 4% severely so.

In addition, 7-10% of the global male population (and 0.5% of women) suffer, to various degrees, from the red-green deficiency form of colour blindness. This means they have problems distinguishing between red and green. These are two of the four main colours used in OSH signs. Red and green mean completely opposite things – green means 'safe' or 'go' and red means 'prohibited' or 'stop'. (The other two colours mainly used in OSH signs are yellow (warning) and blue (mandatory).)

Across Europe, 18-24-year-olds are at least 50% more likely to have a non-fatal accident in the workplace than those in other groups. Young people are also more likely to suffer from an occupational illness. This age group will have had less exposure to OSH literacy within their new working environments and little or no experience of it in their schools. More than half of all young worker serious injuries and deaths occur during the worker's first six months of employment[7].

Other socio-economic considerations also need to be taken into account. Sadly, in many parts of the developing or 'second' and 'third' world, young girls still do not have access to any literacy training and are denied education. Many then go to work in factories or agriculture where they come into contact with hazardous machines, chemicals and work practices.

Many male migrant workers from these developing countries will also have had little OSH education or training before they are recruited to work in the large engineering and construction sites and factories of the Middle East and further afield.

In the workplace

Communication is a discourse between a communicator and a recipient. OSH/risk communications are only as good as the recipient's ability to access and understand them. Good OSH communication can only be achieved through education and training.

In 2010, the Conference Board of Canada, a not-for-profit research organisation, published a report entitled *What you don't know can hurt you. Literacy's impact on workplace health and safety*[8]. This summarised the results of a two-year research project which examined the impact of literacy skills on health and safety in the workplace.

The research, which involved just under

Information & Resources

- **www.oshliteracy.org**
- **www.literacytrust.org.uk/adult_literacy**
- **www.unionlearn.org.uk**
- HSE has published guidance on consulting employees whose first language is not English – **www.hse.gov.uk/involvement/englishlang.htm** – as well as specific guidance for sectors such as the food industry and agriculture where workers with English as a second language are often employed. See **www.hse.gov.uk/migrantworkers**
- **www.colourblindawareness.org**

400 Canadian workers, found that one of the main challenges in raising literacy skills in the workplace is that "many employers are not aware there are any literacy skills issues in their workforce". In addition, it found that employees with low literacy skills may be unaware that they could benefit from improving their literacy skills and "may not realise that their literacy skills are low enough to pose a potential health and safety risk at work".

With these results in mind, employers and educators need to ask themselves if their current OSH education, training, materials and modes of risk communication are fit-for-purpose and accessible to all, whatever an employee's literacy level may be. Because if you are not getting it right the consequences can be deadly as the statistics at the beginning of this article show. Consider the use of visual, non-verbal methods such as pictures, signs or learning materials such as pocketcards and DVDs. These are all useful tools to get messages across to anyone with low levels of literacy or those whose first language is not English. Results from the Canadian study verify this. Researchers found that "when health and safety practices are communicated in written format, a disconnect occurs if workers' literacy skills are too low for them to read or comprehend the manual".

We all have a legal duty of care (under the *Equality Act 2010* dutyholders must make 'reasonable adjustments' and ensure that 'information is provided in an accessible format') and moral responsibility to provide good education and information regarding OSH literacy. This means equipping people with the basic fundamentals in OSH literacy and making all stakeholders aware of barriers and solutions in the acquisition of OSH information.

"Adherence to health and safety policies and procedures demands more than just cooperation – it requires comprehension and communication skills among all concerned[8]."

References

1. **www.oshliteracy.org**
2. International Labour Organization (ILO)
3. **http://ilo.org/global/topics/safety-and-health-at-work/lang–en/index.htm**
4. **www.hse.gov.uk/Statistics/index.htm**
5. *The economic and social cost of illiteracy*, World Literacy Foundation, 2012
6. **www.literacytrust.org.uk/adult_literacy/illiterate_adults_in_england**
7. **www.euro.who.int/__data/assets/pdf_file/0009/97065/4.7.-Work-injuries-EDITED_layouted.pdf?ua=1**
8. **www.cos-mag.com/images/stories/PDFsGeneral/whatyoudontknow.pdf**

Helpful tips for successful OSH communication

When communicating risk to employees and other stakeholders try to use a variety of mediums so that the information is user-friendly and accessible to all. Always be aware that people may have low levels of literacy or other cognitive issues in the language in which you are communicating.

Research, Planning and Reviewing:

- Initially assess people's OSH literacy skills when they start in the place of work or training. People can be very shy about having literacy issues, colour blindness etc and may not confide
- Have OSH literacy or general literacy lessons for all employees, especially new ones
- When giving OSH training and induction don't just keep it in the classroom, make it real. Have a walkabout to show trainees and employees where OSH and fire safety services such as emergency exits, first aid boxes and fire extinguishers can be found and used
- Know your target audience – age group, language and cultural issues, literacy levels, other issues such as sight or audio impairments, what they do and don't need to know – keep it relevant
- Pitch your writing for a target age of around 10-11 years of age (Try not to be patronising). People with high reading ages don't mind reading lower levels but people with lower levels can't read at higher levels. There are lots of tools on the web to help you calculate the reading level/age of your written information
- Involve your target audience in planning risk communications – ask for an opinion
- Always review, audit and update your OSH communications. Get feedback from the target audience and from objective outsiders. Take into account all new employees/trainees and their needs

When providing written information:

- Try using a larger font (size 14 and above)
- Use the Comic Sans font (research has shown that it is the most readable). Times Roman, Arial, Tahoma and Helvetica are also good
- Print information on coloured paper – preferably yellow (research has shown that it makes reading more accessible – especially for people with dyslexia.) A person can be dyslexic in English and not their mother tongue
- Try to use as many pictures and internationally recognised signs and symbols as possible
- Try to use as few graphs and charts as possible. If you do use them, make sure they are concise and clear
- Use headings and topic sentences which engage the reader and make it relevant to them (eg. *Lifting correctly can help you to avoid having back problems. Follow these instructions to find out how*)
- Keep sentences short and bulleted
- Highlight key or difficult words and provide an additional glossary with the information
- Use the 'active' voice and not the 'passive' and try to use commonly used verbs, eg. Active voice – The worker lifted the load. Passive voice – The load was lifted by the worker
- Use a buddy-system for persons with low levels of literacy – a work or training buddy who can explain things to them one on one
- Try to assess if the information has been understood, through simple Q&As or multiple choice questions (assure employees these are confidential)
- If you need to get written information, try to use closed questions with 'Yes' or 'No' answers. Tickboxes are best

Source: www.oshliteracy.org, J.David Magee, 2015

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