

Health, safety and well-being

Activity 4: Understanding risk assessment

Introduction

This activity aims to help learners understand risk assessment and its application in a range of settings. The strategy can be adapted for learners from all areas of learning. Risk assessments provide an objective measure of risk and the principle is used in a wide range of work contexts such as stress management, assessment of the likelihood of repetitive strain injury in particular jobs or the safe design and management of buildings.

Learners will probably be familiar with the term 'risk assessment', but not necessarily understand its implication in the workplace. The aim is to demystify risk assessment and to demonstrate that learners can contribute to the process by undertaking a risk assessment themselves.

This activity is based on a previous example from Engineering. It uses an experiential learning approach, engaging learners in an authentic, real-world experience. When learners reflect on such active learning experiences, they develop new attitudes and behaviours, resulting in deeper understanding and emotional and affective change.

Learners in pilot sites found the activity particularly rewarding and adapted their attitudes and behaviours. For example, learners in one centre came to appreciate that slips, trips and falls are the main cause of accidents requiring time off work. They took care not to leave tools and equipment on the floor to cause obstructions. Unprompted by the teacher, they also cleared away water that had spilled onto the floor. They learned that they, individually, were responsible for health and safety; when they see a problem, they should act responsibly in either dealing with it themselves or in pointing out the hazard to the person in charge. This left them with a greater sense of personal responsibility for the safety of their working environment.

It should be made clear that the intention is to help learners acquire an understanding of risk assessment and the associated actions, not to train them as health and safety officers.

Learning objectives

Learners should be able to:

- identify and record hazards in the workplace
- determine the level of risk posed by a hazard using the risk graph
- make recommendations for removal of a hazard or reduction of risk
- recognise the importance of personal responsibility and initiative in reporting unsafe situations.

Resources required

- Sheets 4.55 to 4.62: Risk assessment learning materials for each learner, which include:
 - risk assessment forms
 - a risk graph
 - further support material for carrying out risk assessments.
 - These materials can also be found at:
http://teachingandlearning.qia.org.uk/resource/qia_eng_5954/screens/eng_04_00_00_00/assets/PDFs/eng_04_00_00_08.pdf.
- Flip chart paper and pens (optional).

Please note: the sheets for this activity are included as a separate PDF document.

Additional sources of information

The **Five steps to risk assessment** leaflet on the Health and Safety Executive website. Download from: www.hse.gov.uk/pubns/indg163.pdf

Starting points

You might plan to use this activity towards the end of a structured induction or health and safety programme when learners have some understanding of their responsibilities towards health and safety and some knowledge of particular aspects of it. This developmental activity requires learners to apply their knowledge and experience in order to analyse and evaluate situations and to make judgements using high-level skills. It will allow you to assess overall learner understanding of health and safety covered during previous learning.

Planning learning in multiple environments

Risk assessments are important in every living and working environment. Learners will be able to practise using risk assessments in most aspects of their lives at work, at home or in their leisure activities. With your learners, plan to find opportunities outside the classroom where they can practise observing and assessing risk.

This will reinforce the message that health, safety and well-being is a matter of individual responsibility, personal attitude and positive behaviour. Learning these attitudes and behaviours takes time. Repeated exposure to decision-making tasks in different environments can promote and reinforce attitudinal change.

Suggested approach

Stage 1

Introduce the learning objectives for the session and outline the purpose of risk assessment. To assess learners' initial understanding, ask them to work in small groups to

share ideas about who might be affected by accidents at work and in what way. For example, personal injuries affect individuals, families and employers directly and indirectly. Ask each group in turn to give feedback to the whole class and pool their suggestions. You might expect older or employed learners to give more detailed responses than younger learners who have not been in a workplace.

Introduce, or revise, some of the specialist terminology of risk assessment. You might, for example, ask groups to agree definitions for 'hazard,' 'risk' or 'control measures.' You could ask learners to 'show you' their definitions on mini-whiteboards.

Relate the risk assessment process (**Sheet 4.5**) to learners' examples above and discuss the likelihood and severity of risk in some of their examples.

Now that you have an idea of learner understanding, you can decide how to organise learners into groups of three for the remainder of the activity. Introduce **Sheets 4.1 – 4.8: Risk assessment learning materials** and the five key principles of risk assessment (**Sheets 4.2 – 4.3**).

Stage 2

Distribute the learning materials (**Sheets 4.1 – 4.8**) and consider the five principles of risk assessment. Refer to the example on **Sheets 4.2 – 4.3**. This is an example of a risk assessment from a motor vehicle workshop. Ask each small group to examine one hazard on the table, commenting and reporting back to the whole group if the future action proposed was adequate to deal with the situation.

Move on to consider the guidelines for determining level of risk (**Sheet 4.3**). Demonstrate how to apply them to a common hazard found in the learners' own work context. Now ask groups to try to apply the guidelines themselves to the hazards from the motor vehicle workshop and to report back to the whole group.

Next, ask learners to identify a potential hazard in the room that you are using or one nearby. For example: angles of open windows, electrical fittings and arrangement of furniture or equipment. Remind learners that everyday items can cause a degree of risk to someone, for example at home, low electrical sockets can be a risk to small children. Ask groups to complete a risk assessment for the chosen hazard, judging the likelihood and severity of the risk and suitable controls and actions. Take feedback, using open questions and prompts to get learners to think carefully and to expand on each other's points. Resist the temptation to give them the answers!

You may need to repeat this joint task if your learners need more practice.

When you think learners have a sufficient understanding of how to assess risk, check that everyone understands how to use the risk assessment form. Send them in small groups to complete risk assessments for other parts of your building, or out into the community or workplace if appropriate. Care must of course be taken not to put learners into dangerous situations, and they may need to be supervised whilst carrying out this task. Prior

agreement may be needed to enter other work areas and safety precautions must be followed.

Ask groups to identify at least three potential hazards and to record them on the risk assessment form (**Sheets 4.6 – 4.7**). Encourage them to draw on their knowledge and experience to make careful and critical observations and to discuss their opinions with each other. They must be prepared to explain and justify their findings.

Stage 3

Groups assess the hazards and levels of risk using the graph (**Sheet 4.8**) to plot their results. They need to judge the likelihood on a scale of 1–5 that an accident could occur, and the severity of any potential accident, also on a scale of 1–5.

Groups now analyse and evaluate the risks and decide whether the existing preventative measures are adequate. They must consider what future actions they would recommend and within what timescale and give feedback.

Stage 4: Consolidating and reflecting on learning

To monitor and consolidate learning, ask groups to report back on their findings and explain their reasoning to the whole group. There are many ways to handle this and you should select an approach best suited to learners' needs and context. You might ask learners to:

- conduct a peer review by exchanging their risk assessment forms and graphs with colleagues in different groups. Groups should use the criteria, the five principles of risk assessment (**Sheet 4.2 – 4.3**), to assess each other's work and then exchange feedback on what has been done well and what could be improved, and how
- summarise their findings and present them on a poster or 'visual organiser' and display it on the wall. Conduct a walkabout review where learners offer explanations and expand each other's points
- present their findings orally to the whole group, illustrated with the poster as a visual aid
- present recommendations to implement necessary improvements
- conduct a simulated health and safety workshop inspection with learners in charge
- write up a 'hazard report' on their findings
- organise a whole class discussion on their joint conclusions (with you as an observer).

In each case, you need to monitor the understanding of key concepts and support and reinforce where necessary. To conclude, refer back to the learning objectives.

Finally, ask learners to reflect on how they learned. In this activity, learners experienced a 'hands on' approach to learning about risk assessment, learning by doing rather than referring to the theory in a book.

Also ask learners to consider:

- which learning skills they used
- how they felt about this approach
- what went well – and why
- what went less well – and why
- where they could use the approach again.

Alternative approaches

Consider using a co-operative learning approach by asking groups to agree ground rules and to allocate each other specific tasks as they undertake the risk assessment and evaluate how well they worked as a team.

Differentiation to meet individual needs

- Consider the needs of your learners and decide whether to select the item or area to be risk-assessed or whether you need to provide support for the group as they work.
- You could also organise groups to include at least one more confident learner. This provides them with an opportunity to deepen their understanding by explaining to others, whilst enabling less confident learners to ask questions informally.
- Consider how learning support assistants can be used most effectively to support this activity. It may mean that learners are able to examine a wider range of settings than would be possible if they were working independently.

Challenges – what learners might do next

You might ask learners to practise and improve their risk assessment skills in their workplace or in other areas of their organisation, seeking support from relevant staff in each situation.

To illustrate the risk assessment process clearly, this activity focuses learners' attention deliberately on concrete examples of risk that they can observe around them. When they are confident in using the process, provide opportunities for learners to move on to assessment of risk due to less tangible hazards that involve physical and psychological factors, personal attitudes and behaviours: for example, learners might consider work-related stress, the challenges presented in particular occupations, or the issues presented when working off-site or outdoors.

Learners might be interested in researching the job role of the Health and safety officer. They could do this by asking to see the relevant member of staff in your organisation or at their workplace, or by using the Internet to find out the skills and qualifications needed for the job.

The Connexions jobs4u careers website has an extensive database with downloadable and printable job descriptions at:

www.connexions-direct.com/jobs4u/.

Embedding literacy, language and numeracy (LLN)

Every learning activity includes many different opportunities to develop LLN skills. Always try to find a naturally-occurring opportunity where learners can appreciate immediately the relevance and importance of the skills they are learning to use. Your LLN specialist will be able to help you to identify specific levels and curriculum references relevant to this activity and to create engaging learning activities to develop the skills.

This activity provides an opportunity for learners to develop a new, specialist vocabulary to use in risk assessment tasks. Health and safety uses a formal language that many learners find challenging. The activity can be used to develop the skills below.

At Level 1 use reference material to find the meanings of unfamiliar words.

- Know there are different sources of information for word meanings: for example dictionary, glossary, key.
- Understand the structure of standard dictionary entries, the abbreviations used, and the sort of information provided about each word.
- Understand the purpose of glossaries and where they are likely to be found. (Adult literacy core curriculum reference Rw/L1.1)

At Level 2 use reference materials to find the meanings of unfamiliar words.

- Understand that there are different sources of information for word meanings, how they are structured, and the conventions they use: for example, paper and electronic dictionaries, glossaries, keys.
- Understand that there are different types of dictionary: for example, contemporary usage, slang, quotations, etymological, antonyms/synonyms. (Adult literacy core curriculum reference RwL2.2)

Useful activities might include:

- Make a list of unfamiliar technical words and phrases used in risk assessments. Allocate these to different individuals or pairs. Ask them to:
 - look up meaning of specialist words in a glossary
 - prepare a 'Plain English' definition of the meaning of the word or phrase
 - share their results and critically review them. Are they technically accurate? Does everyone agree?

These could be used as a card-matching activity or quiz.

Words and phrases might include:

- risk
- hazard
- risk management
- existing controls
- potential risk

- reasonable precautions
- significant hazards
- harmful substances
- control measures
- contamination
- ventilation
- solutions.

Learners should use a technical glossary to record definitions of words and terms for reference. Learners need to use the words or terms in their own sentences to reinforce meaning and spelling.

- Prepare a risk assessment report with some key terms omitted. Using a list of possible words, select suitable ones to complete the sense, using a dictionary to check meanings as necessary.
- In pairs, identify unfamiliar words in a specialist newspaper or journal report (for example, on a health, safety and well-being issue). Decide whether it is possible to make a guess at meanings, looking at the words' structure and context. Make a note of possible meanings. Use a dictionary to check these out, selecting meanings that fit best.
- In a group, play **Call my bluff**. Each team uses dictionaries to select three or four unfamiliar words, recording definitions. Using knowledge of word roots and origins, invent two more plausible fictitious meanings. Try out words and meanings for the other team to select the most likely.

Session plan

Aim: For learners to develop an understanding of the principles of risk assessment.

Learning objectives/outcomes

Learners should be able to:

- identify and record hazards in the workplace
- determine the level of risk posed by a hazard using the risk graph
- make recommendations for removal of hazard or reduction of risk
- recognise the importance of personal responsibility and initiative in reporting unsafe situations.

Time	Teacher plan	Learner activity	Resources
0-15 min	<p>Stage 1</p> <p>Introduce learning objectives. Outline the purpose of risk assessment. Assess learners' initial understanding – small group task to share ideas about who might be affected by accidents at work and in what way. Take feedback.</p>	<p>Informal groups brainstorm ideas to answer questions: 'Who can be affected by accidents? How and why?' Define terms. Feedback.</p>	<p>Whiteboard. Pens. Sheets 4.1 – 4.8.</p>

15-30 min	<p>Stage 2 Organise learners into new groups of three. Distribute learning materials.</p> <p>Explain five principles of risk assessment. Check understanding.</p> <p>Discuss the motor vehicle workshop example in Sheet 4.2 – 4.3. Ask each group to consider one hazard from the table and report back. Take feedback.</p> <p>Discuss level of risk. Ask groups to apply guidelines to their examples from motor vehicle workshop. Take feedback. Agree and assess a 'local' example. Ask groups to complete a risk assessment of this. Take feedback.</p>	<p>Form groups of three. Examine hazards in Sheet 4.2 – 4.3.</p> <p>Discuss and feedback.</p> <p>Consider levels of risk in Sheet 4.2 – 4.3. Discuss and feedback.</p> <p>Work on a 'local' example as a group. Complete a risk assessment form (Sheets 4.6 – 4.7). Contribute findings to whole group discussion.</p> <p>Ask/answer questions.</p>	<p>Sheets 4.1 – 4.8.</p>
30-75 min	<p>Stage 3 Describe risk assessment task and negotiate with learners about areas they should cover.</p> <p>By agreement, establish safe working practices during the activity.</p> <p>Supervise and support as necessary.</p>	<p>In groups of three:</p> <ul style="list-style-type: none"> • identify and record risks in selected area • identify and record control measures in place • return to classroom and plot graph (Sheet 4.8) • recommend and record future actions and timescales • plan feedback. 	<p>Flip chart paper and pens (optional).</p>

75-90 min

Stage 4

Reconvene whole group. Monitor and consolidate learning. Use open, probing questions to draw out key learning points on topic.

Ask learners to reflect on the use of the experiential learning approach.

Groups report back findings to whole group on topic.

Groups reflect on the learning process itself:

- which learning skills they used
- how they felt about this approach
- what went well – and why
- what went less well – and why
- where they could use the approach again.

Whiteboard.

Assessment of learning objectives/outcomes

- Risk assessment forms and graphs.
- Monitoring of group work and discussion and feedback on recommendations for removal of hazard or reduction of risk.

Differentiation to meet individual needs

- Selection of item or area to be risk-assessed to be related to ability of groups.
 - Plan grouping of learners to give feedback to encourage communication.
 - Composition of groups to encourage collaboration and learning from each other.

Teacher evaluation

Consider which parts of the session were effective and why.

Learner feedback

Consider whether the activities were suitable for all learners and whether the session helped to develop the expert learners.

Personal, learning and thinking skills developed

- Team workers:
 - Respect the opinions of others.
 - Accept responsibilities in a group.
 - Contribute to group activity.
- Self-managers:
 - Act responsibly in a workshop or workplace.

Literacy, language and numeracy skills developed

Literacy

At Levels 1 and 2, learners can use reference material to find the meanings of unfamiliar words.