

Basic Skills and Communication for Construction Workers



Executive Summary

Guidelines
and
Training Materials

Basic Skills for Work

Combined Basic Skills and Communication Training for Low-Skilled Workers in Five
Different European Work Sectors



Education and Culture

Leonardo da Vinci

BASIC SKILLS FOR WORK

In the past years, the issue of “Basic Skills” has gained particular attention in most European countries. Of particular concern are what is generally called ‘functional literacy’ and ‘functional numeracy’ defined as “*the ability to read, write and speak in the respective language and to use mathematics at a level necessary to function at work and in society in general*”.

This Curriculum has mainly been designed for adult education providers, trainers and teachers. It consists of different modules, the main chapters dealing with information on the target group, literacy, numeracy and social skills, that allow for flexible utilisation according to various specific requirements.

The main objective is to empower employees with improved basic skills in both numeracy and literacy (numbers, measures, calculations, reading comprehension, short writing tasks). The Curriculum also focuses, on important social and communication skills particularly required in this profession.

LITERACY: DIDACTIC BACKGROUND

Learning contents and purpose

Reading and understanding signs and symbols: Focus on health and safety issues!

- 1 Inform learners about different types of signs and symbols that are important when working in the construction area (prohibition signs, mandatory signs, warning signs, safe condition signs, fire equipment signs) to enable them to differentiate
- 2 Enable learners to associate signs and symbols with specific and correct meanings
- 3 Enable learners to convey respective messages to their colleagues or other people possibly involved (clients, representatives of other companies, suppliers, passers-by etc.)
- 4 Respective contents should always be related to the actual workplace of your learners (when choosing examples, always consider the context of learners’ everyday work experience)
- 5 Dealing with signs and symbols relevant for the construction area, generally increase your learners’ awareness of health and safety issues

Starting out on a basic literacy level (alphabet, alphabetical order): Focus on relation to workplace surroundings!

As for writing skills, it is important to consider that a high number of workers in the construction area are of East European origin and are partly used to different alphabets and scripts. It is therefore necessary to start work on literacy training on a very basic (entry) level.

Consider the following:

- Practical relevance and closeness to actual experience of all materials used and all examples given (e.g. tool about alphabetical order: names should be the actual names of the working team involved)
- To make learning contents relevant for students and demonstrate their actual employability: focus on workplace related contents (e.g. the vocabulary being taught and dealt with during training: it is most important for the learners to be confronted with terms denoting concrete items of their work, such as work tools, machines etc.)

Basic writing exercises: Focus on relevance for everyday life!

Practical exercises concentrate, among others, on how to fill in forms, keep lists and maintain accurate, legible and complete records.

Consider the following:

- Use authentic materials, i.e., for example, forms that learners will actually come across in their everyday life (forms used at certain offices, registrations, CV forms of actual companies etc.) to demonstrate relevance of learning contents
- Ask and motivate your learners to bring their own sample forms
- Exercises of how to fill in forms can always be made use of as a basis for joint exchange of experience, constructive reflection on learners' skills, strengths and weaknesses, discussion on past success and failure, future perspectives etc. Hence these basic writing exercises can be a starting point for communicative training units (combination with social skills training) in which learners practice how to effectively pass on information to each other
- Exercises (e.g. filling in CV forms) can be written preparation work for various role plays acted out in class (like job interviews etc.), i.e. intensive training of social skills

Reading exercises: Focus on filtering important information related to workplace surroundings!

Reading comprehension includes exercises and classroom activities dealing with how to obtain information from instructions and/or catalogues (e.g. of manufacturers). Learners will train, for instance, understanding and checking delivery notes, as well as passing on related messages to colleagues. There can also be practise on reading texts and notices about safety (e.g. safe lifting), handling and storage procedures. Various manuals can be carefully read and summarised to colleagues and fellow learners.

Consider the following:

- 1 Take examples from actual work life (catalogues etc.)
- 2 Always point out and demonstrate the relevance and usefulness of reading practice to your learners (how to make things easier for them in everyday job life)
- 3 In order to achieve efficiency and ideal learning results and to provide for change in a sufficient way:
 - a. again and again combine reading and writing activities in class
 - b. Often motivate your learners to compare results, i.e. at the same time carry out communication training and reflection work (see sample methods and tools below)

Learning materials for literacy

The following exercises can be found in the part 2 of this Curriculum (Toolbox). They cover the following sectors: Signs and Symbols, Alphabetical order, Filling in forms, Filtering important information, Understanding information

NUMERACY

Learning contents and purpose

Focus on relation to workplace surroundings and relevance for everyday work!

In order to empower employees with improved basic skills in numeracy, methods and tools in a course for construction workers shall primarily be related to tasks and duties included in actual jobs in this work area. Since it is, for example, of crucial importance to be able to mix materials correctly, learners shall be confronted with different exercises on volumes and measurements and be trained how to work out ratio and direct proportion. One of the aims of such trainings shall be to increase the learners' awareness and knowledge of how to use mathematical information and language and how to identify suitable calculations to achieve an appropriate outcome (this is, for instance, important for doing or completing a materials list).

The exercises attached are dealing with the following aspects:

- 1 Basic numeracy skills, using mathematical information
- 2 Using the basic arithmetical operations
- 3 Practising common measures
- 4 Practising common measures by converting
- 5 Working out metric units of lengths
- 6 Working out perimeter and area
- 7 Working out ratio

Other major elements of basic skills training for construction workers are:

- Shape and space
- Dealing with whole numbers
- Negative numbers
- Fractions
- Decimal measures
- Everyday percentages
- How to work out metric units of width
- Basic numeracy, arithmetic, calculation skills (e.g. for working out correct amounts of materials)

Consider the following:

1. Provide for an overall brush-up of basic mathematics (explanation and demonstration) and make sure each individual student understands contents (adding, subtracting, multiplying, dividing etc.)
2. No pressure, provide enough time for students to do respective exercises

3. Practical relevance and closeness to actual experience of all learning materials used and all examples given (e.g. exercise on doubling amounts, take cement or sand as an example)
4. To make learning contents relevant for students and demonstrate their actual employability: focus on workplace related contents (see methods and sample tools below)
5. Use authentic materials, i.e., for example, forms that learners will actually come across in their everyday job life (forms used at certain companies etc.) to demonstrate relevance of learning contents
6. Ask and motivate your learners to bring their own sample forms
7. Exercises can always be made use of as a basis for joint exchange of experience, constructive reflection on learners' skills, strengths and weaknesses, discussion on past success and failure, future perspectives etc.
8. Hence these basic numeracy exercises can be a starting point for communicative training units (combination with social skills training) in which learners practice how to effectively pass on information to each other.
9. Exercises can be written preparation work for various role plays acted out in class i.e. intensive practical social skills training
10. The exercises are to be done individually as a comprehension check. Compare the results in class.

Learning materials for numeracy

The following exercises can be found in the part 2 of this Curriculum (Toolbox). They cover the following areas:

- 1 Basic numeracy skills, using mathematical information
- 2 Using the basic arithmetical operations
- 3 Practising common measures
- 4 Practising common measures by converting
- 5 Working out metric units of lengths
- 6 Working out perimeter and area
- 7 Working out areas for walls
- 8 Working out ratio

COMMUNICATION SKILLS

Learning contents and purpose

Focus on the relevance for everyday working life!

In order to empower learners within a basic skills course for construction workers with relevant social and communication skills, there shall be particular emphasis on reflection on communicative behaviour and different aspects of conflict management. Group work (role plays, imitation of job situations etc.) shall concentrate on both speaking skills (how to express oneself, respond properly, give relevant information to colleagues, superiors, employers, representatives of other companies etc.) and listening comprehension (understanding simple explanations and instruction in order to be able to carry out duties).

Major elements of social skills training for construction workers shall, in addition, be the following:

- Team building
- Team awareness
- Team spirit
- Social responsibility of the individual within a group of working colleagues
- Cooperation among colleagues/fellow students
- Improvement of mutual assistance

Consider the following:

1. Provide for an overall positive atmosphere of openness and trust and make sure each individual student feels comfortable and free to work on reflection and communication
2. No pressure, provide enough time for students to communicate
3. Make your students aware of the fact that effective spoken communication is essential in construction work and that passing on information clearly is essential to everyone's safety and successful work outputs in your team.
4. Therefore focus on conveying the following principles:
 - a. always speak clearly
 - b. report things quickly but also carefully and always in an understandable way
 - c. keep to the facts
 - d. remember to report all necessary facts
 - e. keep facts in order
5. Always refer to practical relevance and closeness to actual experience of all learning materials used and all examples given:
6. To make learning contents relevant for students and demonstrate their actual employability: focus on workplace related contents (see methods and sample tools below)

7. In order to demonstrate relevance of learning contents: Use authentic materials dealing with contents learners will actually come across in their everyday job life
8. Ask and motivate your learners to bring their own materials and examples

Raise your learners' awareness of different roles and functions within a team:

- Who does what at a building site?
- Who takes which responsibility?
- How do we all act as a team?
- Who has working relationships with whom?
- Who gives orders and who receives them?
- Are the roles organised on the same levels or not?

When practising to describe images and listen to descriptions, focus on:

- learners' ability to catch distance, proportion and similarity relationships
- their ability to adopt the viewpoint of others
- learners' ability to represent with accuracy the verbal description of others

Exercises can always be made use of as a basis for joint exchange of experience, constructive reflection on learners' skills, strengths and weaknesses, discussion on past success and failure, future perspectives etc.

Exercises can be written preparation work for various role plays acted out in class, i.e. intensive practical social skills training

Learning materials for communication skills

The following exercises can be found in the part 2 of this Curriculum (Toolbox). They cover the following areas:

1. Team building and team awareness
2. Team spirit
3. Cooperation among colleagues
4. Improvement of mutual assistance



Leonardo da Vinci

© 2006 BEST Institut für berufsbezogene Weiterbildung und Personaltraining, Vienna, Austria
Print: Plankopie Eder, Vienna, Austria

This publication was developed in the course of the LEONARDO DA VINCI pilot project
“Basic Skills for Work - Combined Basic Skills and Communication Training for Low-Skilled Workers
in Five Different European Work Sectors”

This project has been funded with support from by the LEONARDO DA VINCI programme of the
European Commission. This publication reflects the views only of the authors, and the Commission
cannot be held responsible for any use which may be made of the information contained herein.

Project number: A/04/B/F/PP-158.132

For non-commercial purposes, a download version of this publication is available at least until
30 September 2009 at the project homepage:

<http://www.basic-skills-for-work.org>