



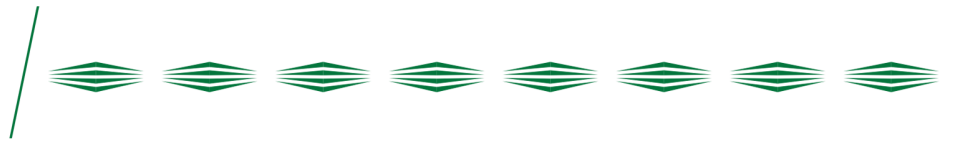
 **Green
Manuals**

 Nordplus

OVERALL TYPES & PURPOSES OF
MANUALS, CONCEPTUAL CONTENT
ANALYSIS

Inese Vilcane

LDASA

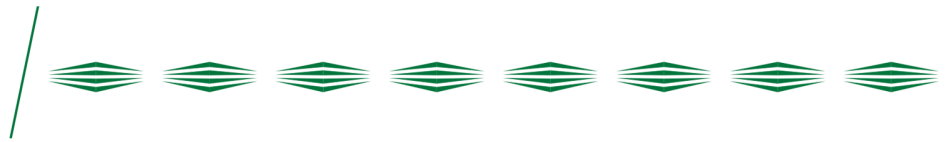


Framework on Adult Education

In the "Digital Europe" program developed in 2019, the European Commission indicates that the transformation of the economy to the highest added value, productivity and work efficiency requires increasing the digital skills of the population, and in particular, the employees in all sectors of the economy. It is necessary to provide support for the acquisition of digital skills for those residents, incl. for employees whose digital skills are at a very low level and/or their current job does not contribute to their acquisition or use, but also in general to promote the continuous development of digital skills of adults of all levels for life and work in conditions of digital transformation. One of the directions is to create digital learning content for high-quality implementation of distance learning. (European Committee, 2019)

Humans are able to learn to implement novel rules from instructions rapidly, which is termed "instruction-based learning". This remarkable ability is very important in our daily life in both learning individually or working as a team, and almost every psychology experiment starts with instructing participants.

Manual - (instructions) a book that gives you practical instructions on how to do something or how to use something (Cambridge University Press & Assessment, 2023). Manual or instruction-based learning (IBL; sometimes also called rapid instructed task learning; RITL) refers to the ability to immediately and efficiently learn a novel task from instructions (Ole et al., 2013a). IBL is one of the most recent evolutionary innovations that made us who we are today. Homo sapiens gained evolutionary advantages from the ability to collaborate based on communicating instructions (Meiran et al., 2016). Earlier behavioural studies have found that working memory relates to IBL but not sufficient for IBL (Liefoghe et al., 2012; Meiran et al., 2016), which inspired later scientific investigations of mechanisms of IBL. By definition, IBL involves three steps: (1) understanding the instruction with the motivation to learn, (2) retrieving the instruction when seeing relevant stimuli in context, (3) applying the learned rules when encountering corresponding stimuli. (Kang et al., 2022) Instruction manuals need to explain specialised information to readers. Using metadiscourse effectively, i.e. engaging with readers and guiding them through the text, is therefore crucial for successful communication (Herriman, 2022). In order to make manuals easier to understand, they are increasingly supplemented with various visual reference materials. The trend of recent years is to issue digital work instructions with augmented reality (Eversberg et al., 2022).



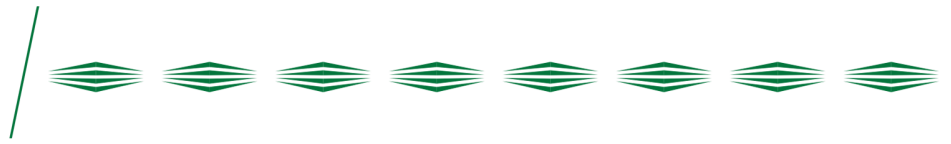
In recent years, the issue of security has become increasingly relevant, as Fenghua et al. transmission and usage instruction interaction are often exploited by attackers to threaten complex information networks security. Design five basic instruction operations (i.e., instruction generation, distribution, decomposition, execution, and execution outcome feedback) are highlighted, which must define safety rules, to monitor and control the instruction interactions. (Fenghua et al., 2020)

Developing a manual is usually associated with several challenges: firstly, understandable and correct language, considering that they are translated into different languages and, secondly, as Schubert (2016) points out, both precision and economy are central concerns of instruction manuals. Sometimes the reader of the manual does not read it from cover to cover but tends to skim their way through picking out pieces of information that are relevant for a particular situation. This information must therefore be presented in a way that makes it easy for readers to find. (Herriman, 2022)

Manuals are universal documents that can be understood by ordinary people. It explains certain operations and processes of different departments. With a Manual, the company or institution can have a standard for its operations. (Founder's Guide, 2023) The importance of considering the needs of the target audience and organising the content accordingly. Advice is to structure, label and sequence the content clearly and to organise it into small manageable and identifiable topics which can be broken down into task-oriented step by step procedures. (Herriman, 2022)

According to the type of objectives, manuals can be classified as follows:

- 1) **Product Manual.** This is also called the “Instruction manual”. It is a manual that instructs users on how to use the product;
- 2) **Installation Manual.** This is a manual on how to set- up or install the product;
- 3) **Troubleshoot Manual.** A type of manual used to fix parts of the product;
- 4) **User Manuals.** A type of manual that focuses on different kinds of users- administrators, maintenance personnel, beginners, managers, or students;
- 5) **Operations Manual.** This is the manual for the operations of the company or institution. It is a set of standards and procedures for operations, work standards, and policies of the company or institution;
- 6) **Crisis Management Manual.** A manual on how to respond to crises or tragedies such as earthquakes, fires, storms, tsunamis, or violence on the work premises;
- 7) **Audit Manual.** This type of manual is a guide on how to do or make finance reports in relation to accounting and auditing matters. (Founder's Guide, 2023)



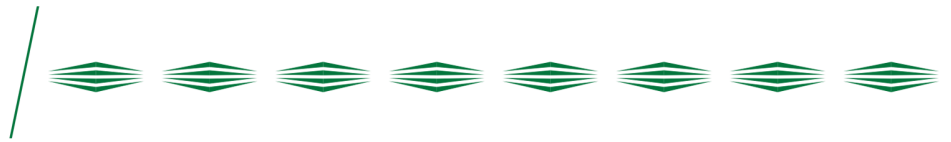
One of the most comprehensive groups of manuals in terms of their diversity in terms of their purpose, types and structure is the "Operations Manual". In each company or institution, depending on the industry, type of activity and number of employees, different instructions and manuals are developed. Some of them are free-form, which you develop in free-form at your discretion, but some of the instructions are strictly regulated at the national level. The major "Operations Manuals" are listed and described in more detail below.

1. Quality management manuals, which includes the management of all processes, their development is regulated in standards. It consists of: strategic goals of the company or institution, policy in the field of quality, principles of quality management, guarantees of implementation of the policy in the field of quality, general characteristics and structure of the company or institution, directions of operation, division of functions between managers, directions of development of operation, personnel and material resources, quality scope of the management system, composition and indices of quality management processes; the structure of the guiding documents of the quality management system; list of quality management system guiding documents, internal quality audits, compliance of quality management system processes with the content of ISO 9001:2015 standard requirements, etc.

When a company documents its QMS, it is an effective practice to clearly and concisely identify their processes, procedures and work instructions in order to explain and control how it meets the requirements of ISO 9001:2015. This begins with a basic understanding of the hierarchy of these terms and how to efficiently categorise the workings of a management system within them. (The 9000 Store, 2023)

2. The organisation's policy and procedure manuals, which include organisation culture, employment procedure, employee benefits, work-from-home policies, communication policies, workplace guidelines, payment procedures, employee code of conduct, protocols for technology usage.

A procedure manual, also known as a policy and procedure manual, is a resource for employees that establishes guidelines and protocols for all the major principles, actions and decisions of a department or organisation. It can outline the procedures and expectations for things like dress codes, hiring practices and even payroll. By creating a procedure manual with clear and descriptive policies and standards, you can improve the effectiveness, efficiency and communication of your organisation.



In order to create procedure manuals that are more accessible, many organisations have started using cloud-based systems, online resources or knowledge management software. These systems make it easier for employees to access and organisations to update procedure manuals. Additionally, they allow organisations to provide links to relevant resources.

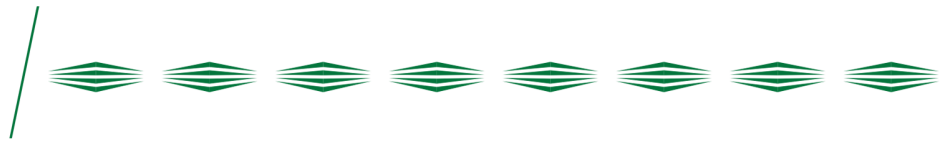
3. Internal rules manual, which include rules that employees must follow. They include: general questions about the purpose of the regulations and target groups, notification procedures; information and rules related to the institution's or company's process and work organisation, requirements therein; the safety and order of the persons in the institution or company, which determines the actions of the responsible persons, if physical or emotional violence is detected; rights and obligations of persons in the institution or company; awards and recognition; responsibility for non-compliance with the internal rules of the institution or company; general questions about the rewriting of the rules, entry into force, etc.

4. Occupational safety and health manuals, their contents are usually strictly regulated by the national government. According to the content, manuals in occupational health and safety can be divided into 2 types: introductory training, which is carried out when starting work, and safety briefing.

In the introductory training, employees acquire the following knowledge: the type of company's operation and the most important risk factors of the work environment; impact of work environment risk factors on safety and health; rules of the company's agenda; occupational safety and health system in the company; the importance of mandatory health examinations and their procedure; safety signs; employee rights and obligations; employee representation; general requirements for actions in emergency situations and in the event of an accident at work; other issues.

In the safety briefing, the employee is introduced to the work to be performed, the instructions approved by the employer and the occupational safety requirements according to the specific type of work or profession at the relevant workplace, by practically demonstrating safe work techniques and methods and, if necessary, using visual aids.

- The following basic questions should be included in the safety briefing instruction: general requirements, conditions for the performance of the relevant work; specific characteristics of the specific type of work. Hazardous areas of the technological process, equipment; health-harmful and dangerous risk factors of the work environment and, if necessary, their maximum permissible norms (limit values); collective and individual occupational safety and health means and their use; fire safety and explosion protection



requirements; electrical safety requirements; procedure for reporting detected damage to equipment, devices and tools; procedure for reporting an accident, accident or other emergency at work; responsibility for non-compliance with the requirements of the occupational safety and health instruction.

- Occupational health and safety requirements when starting work: preparation of workplaces, personal protective equipment for work; inspection of equipment, tool, fencing, signalling, locking and other protective devices, as well as protective grounding, ventilation, lighting; sequence of correct start-up of the technological process, equipment, devices, facilities; the order of exchange transfer and acceptance in a continuous technological process; cases when it is forbidden to start work.

- Occupational health and safety requirements when performing work: safe working techniques in the use of equipment, devices and tools; requirements when working with raw materials and consumables; requirements for safe operation of transport, lifting devices and mechanisms; conditions for keeping the workplace in order; specific requirements for the use of personal protective equipment; cases when work must be stopped; actions that are prohibited.

- Occupational health and safety requirements at the end of work: sequence of safe disconnection, stopping of the technological process, equipment, devices, facilities; requirements for arranging the workplace.

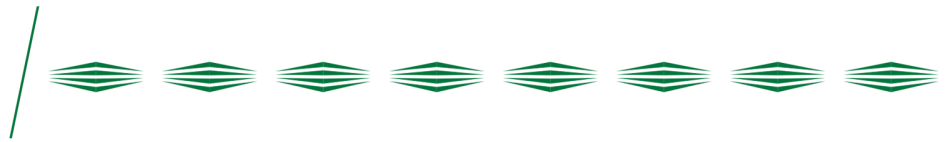
- Occupational health and safety requirements in emergency situations: actions in situations that may cause an accident or accident; actions in the event of accidents, explosions, fires and accidents; first aid. (MK 749, 10.08.2010.)

5. Fire safety manuals are also regulated at the national level. Fire safety manuals are also regulated at the national level.

The following information shall be provided in the fire safety instruction:

- general and fire safety information of an economic activity object or a public object: type of object and territory use; the engineering systems important for fire safety in the territory, facility, its fire protection compartments and floors; fire hazard and explosion hazard of the heating system;

- fire hazard and explosion hazard of the ventilation system; the maximum permissible fire load (MJ/m²) or the maximum permissible amount of substances and objects that can be located in a production or storage facility at the same time; description of the existing fire extinguishing devices, equipment, machinery, inventory and equipment; possible risks of fire outbreaks and preventive measures to reduce them; the maximum



permissible number of people in the object, if more than 50 people can be present in the object, its fire protection compartment, floor or separate room at the same time; according to the type of use of the object or territory – other fire safety requirements and instructions, which are not mentioned in these regulations;

- procedure for maintaining evacuation routes and access roads to the facility; requirements for the operation of the engineering systems important for fire protection of the object, safety measures to be taken during the fire protection system failure, and the period of operation of the fire protection system equipment (devices);

- description of the technological process, explosion hazard and fire hazard, explosive hazard and fire hazard of substances and objects to be used and stored, as well as the procedure for using, storing and transporting said substances and objects; procedures for performing fire-hazardous works; action in case of fire:

- procedures for calling the fire service; procedures for evacuation of people; procedures for evacuating people with special needs and measures to ensure evacuation; procedure for stopping the operation of technological equipment and engineering networks; procedure for disconnecting wiring, electrical equipment and electrical devices; procedure for starting the engineering systems important for fire safety; procedures for using fire extinguishers; procedure for evacuation of material values. (MK 238, 19.04.2016.)

6. Work process manuals, which include work tasks, are usually developed by the employer to optimise work processes, which include work tasks, are usually developed by the employer to optimise work processes. States what needs to be done and why.

7. Equipment and machinery maintenance manuals, which include technical information on equipment use, maintenance. These manuals are usually developed by an industry specialist based on the technical documentation and instructions of the equipment or machine manufacturer.

8. Manuals for using digital tools. The use of digital tools is developing very rapidly, it takes over the trends of people's everyday life and work processes, which creates additional training needs.

In general, all "Operations Manuals" are developed with the aim of making the operation of a company or institution more sustainable, more efficient, safer.

Digital assistance systems can also downsize processes, save time and support necessary decisions through information exchange. This can lead to additional support for employees, provided that the amount of work does not increase at the same time. At this



point, a high degree of system transparency is required, as well as consideration of the scope of action and the knowledge of the employees. (Terhoeven et al., 2022)

Good and available free practices and resources to implement

Title	<i>Ventspils digital centre</i>
Year(s) implemented	2023
Short description of the practice	<i>Video instruction on learning and using various digital tools that educators can use in the learning process. Digitally available video instructions, example, "First steps to work with Scratch", "Creating crossword puzzles online", "Buncee - creating visuals", "Padlet wall", "Google Classroom", "Quality educational content creators on YouTube", "Socrative " etc.</i>
Lessons learnt-impact	<i>Educators have the opportunity to learn various digital tools to make the learning process interactive, creative and exciting.</i>
Any existing evidence, i.e url, image e.t.c.	https://macities.digitalaiscentrs.lv/video-instrukcijas/

Title	Latvian Safer Internet Center
Year(s) implemented	2017
Short description of the practice	<i>Latvia's Safer Internet Center educating the public about children's safety on the Internet and provides the opportunity to report discovered violations on the Internet. Instructions are available on the following topics: "Social networks", "Emotional humiliation", "Sexting", "Extortion of nude photos", "Internet addiction", "Passwords", "Game Security", "Media Literacy".</i>
Lessons learnt-impact	<i>Adults are instructed how to teach children about safe use of the Internet, how to recognize dangerous situations, etc.</i>

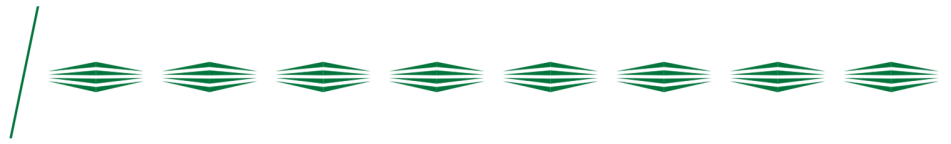


Any existing evidence, i.e url, image e.t.c.	https://drossinternets.lv/lv
Title	<i>LDASA Occupational safety and health manuals database</i>
Year(s) implemented	2016
Short description of the practice	<i>LDASA members have access to a very useful e-site, which contains more than 1000 resources - instructions, sample documents, regulatory acts, forums and a lot of other valuable information that is useful for occupational health and safety specialists in daily lives. Only full members (with password) can access.</i>
Lessons learnt-impact	<i>Occupational health and safety professionals can use ready-made instructions in the daily training process on occupational health and safety.</i>
Any existing evidence, i.e url, image e.t.c.	https://www.ldasa.eu/

Daily usage opportunities

Training plays a large role in organisations, and it is well known that estimates of annual spending by organisations or institutions on training and development are in the billions. With economic trends showing decreases in the quantity and quality of labour coupled with rapid technological advancements and the globalisation of markets, the importance of effective training and development programs will most assuredly increase. The academic literature is predominantly grounded in a traditional model of systematic instructional design that admonishes practitioners to conduct needs assessment at the organisation, job, and person levels. Nevertheless, this traditional approach has been criticised for its linear structure and cumbersome processes. (Day et., al, 2006)

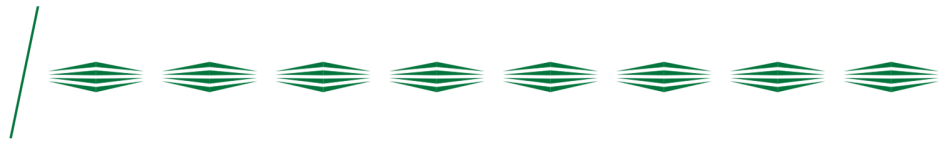
New technologies are influencing today's work and change social attitudes towards the organisation and design of work. Against this background, the question arises as to how human-centred work design has to be in the digital age. In order to derive indications for work design, first it is necessary to find out which work conditions actually are present for different tasks and what their level of digitization. A human-centred supporting assistance system can offer the chance to reduce risks or save time for the employees. However, it is important to adapt the respective systems and the associated interaction to the abilities and



skills of the employee. Lower learning and interaction requirements are evident in object-related tasks, employees are faced with new tasks less frequently. There is a high repetition of some operation steps during work in, with employees often getting predefined work performance parameters. It results in a tendency toward monotonous work processes in object-related tasks. In particular, employees in the manufacturing and transportation subclusters are often prescribed work instructions in all details. In this area, mobile devices and augmented reality offer great potential for mental relief. Both during task execution and for learning processes, these can enable targeted, individually adaptable information provision. Here, it is important to design assistance systems that are favourable for learning and to adapt them to the respective knowledge of employees. The focus is on the digital competence development of employees. This is necessary in order to avoid a high level of stress for employees when dealing with the high amount of digital services. (Terhoeven et al., 2022)

Demands in adult education

LDASA is new to Nordplus projects, and still, since 2006, joins basic-level and higher-level OSH experts working across various industries. The members of the Association are adult education trainers that provide training in workplaces and are in charge of work instructions (manuals) development. When written well, work instructions can result in faster and more efficient movement, quality improvements, fewer disruptions, and increased worker satisfaction. However, drafted poorly can lead to severe consequences, including accidents, injuries, delays, and quality issues. Latvian partner is an expert in manual conceptual creation and offers a "Manual bank" to OSH specialists with more than 1000 work-related manuals in a textual format that can be adapted and printed for training purposes. Only since July 2020 it is allowed to use the solutions of information technologies in documenting the processes related to occupational safety and health in Latvia, so Latvian OSH teachers and trainers still lack the digital competence how to adapt existing manuals to appropriate digital format that is easily accessible and understandable for adult learners, especially to those with low-level media literacy. There is a need for a more dynamic attitude - videos and pictures included as adult learners demand a more modern format. Moreover, digitalizing work-related manuals are needed to reduce landfill waste significantly.



References

- Cabinet of Ministers. Regulations of the Cabinet of Ministers No. 749, 10.08.2010. (MK 749, 10.08.2010.) Training procedure in occupational health and safety issues. Latvian Ambassador.
- Cabinet of Ministers. Regulations of the Cabinet of Ministers No. 238, 19.04.2016. (MK 238, 19.04.2016.) Fire safety regulations. Latvian Ambassador.
- Cambridge University Press & Assessment. (2023). Cambridge Dictionary.
<https://dictionary.cambridge.org/dictionary/>
- Cole, M.W., Laurent, P., Stocco, A. (2013). Rapid instructed task learning: a new window into the human brain's unique capacity for flexible cognitive control. *Cognit. Affect Behav. Neurosci.*, 13 (1), pp. 1-22.
- Day, e.A., Blair, C., Daniels, S., Kligyte, V., Mumford., M.D. (2006). Linking instructional objectives to the design of instructional environments: The Integrative Training Design Matrix. *Human Resource Management Review* 16, 376–395.
- European Committee. (2019). Opinion of the European Committee of the Regions on the 'Digital Europe programme (2021-2027). *Official Journal of the European Union*, Brussels, (2019/C 86/14).
- Eversberg, L., Ebrahimi, P., Pape, M., Lambrecht, J. (2022). A cognitive assistance system with augmented reality for manual repair tasks with high variability based on the digital twin. *Manufacturing Letters*, 34, 49-52.
- Founder's Guide. (2023). *Manual of Operations: Key for Knowledge Management*.
<https://foundersguide.com/>
- Herriman, J. (2022). Metadiscourse in English instruction manuals. *English for Specific Purposes*, 65, 120–13.
- Indeed, Career Guide. (2023). *A Comprehensive Guide to Procedure Manuals*.
<https://www.indeed.com/career-advice>
- Kang, W., a, Hernandez, S.P., Wang, J., Malvaso, A. (2022). Instruction-based learning: A review. *Neuropsychologia*, 166, 108142.
- Liefooghe, B., Wenke, D., De Houwer, J. (2012). Instruction-based task-rule congruency effects. *J. Exp. Psychol. Learn. Mem. Cognit.*, 38 (5), pp. 1325-1335.
- Meiran. N., Pereg, M., Givon, E., Danieli, G., Shahar, N. (2016). The role of working memory in rapid instructed task learning and intention-based reflexivity: an individual difference examination. *Neuropsychologia*, 90, pp. 180-189.



Schubert, C. (2016). Cohesion in contrast: A case study of English and German user manuals. *SKY Journal of Linguistics*, 95-117.

Terhoeven, J., Tegtmeier, P., Wischniewski, S. (2022). Human-centred work design in times of digital change –work conditions, level of digitization and recent trends for object-related tasks. 55th CIRP Conference on Manufacturing Systems, Science Direct, *Procedia CIRP* 107, 302–307.

The 9000 Store. (2023). ISO 9001 Processes, Procedures and Work Instructions.
<https://the9000store.com/>