United Nations

# BLENDED LEARNING METHODOLOGIES FOR CAPACITY DEVELOPMENT

## BY THE ECONOMIC AND SOCIAL ENTITIES OF THE UN SECRETARIAT

October 2020

# TABLE OF CONTENTS

# 1 BACKGROUND

## 1.1 Purpose of consultancy

Projects implemented by the UN Secretariat support developing countries in the priority areas of the 2030 Agenda for Sustainable Development and have most recently provided support to countries to address the socio-economic effects of the COVID-19 crisis and its aftermath.

Projects implemented by UN Secretariat entities have assisted Member States in policy development and formulation by working with high level policy makers or technical experts, relying heavily on traditional face-to-face delivery modalities, including trainings, workshops, field visits, seminars, policy dialogues and consultations. The use of e-learning, either on its own or in a hybrid/mixed model, has not been fully explored despite the rapid technological developments over the last two decades. The COVID-19 pandemic has necessitated the UN Secretariat entities to explore the use of e-learning in delivering capacity development activities.

The new reality conditioned by the COVID-19 pandemic, with its travel and meeting restrictions, is further redefining the ways the United Nations operates and delivers its services to the Member States. Using virtual means has become a necessity and many different ad-hoc methodologies and platforms are being used. The United Nations itself has also been largely successful in adapting to a remote *modus operandi*, with many staff members gaining valuable insight and experience by adjusting their work to the COVID-19 restrictions.

These recent developments, which have precipitated a shift in the UN Secretariat's approach to capacity development, provide an opportunity for the United Nations to reflect on its capacity development delivery models and design new delivery models using information technologies and e-learning, blended with traditional training modalities, to help realize the transformative change that the projects set out to achieve.

This consultancy assessed the current state of e-learning in UN and non-UN entities, including the aforementioned entities' readiness for using e-learning on its own or in combination with face-to-face modalities in supporting the capacity of Member States in policy development. The study also identified best practices and lessons learned in supporting capacity development through e-learning or mixed/hybrid methods and for adapting face-to-face trainings to the online space.

An external consultant, Atish Gonsalves, a leading educational technologist with over 20 years of experience in the field, was brought on board in August 2020 to undertake an independent review of eLearning efforts and make recommendations. The

review was conducted by undertaking a series of semi-structured interviews with key stakeholders (primarily from the entities and other UN agencies) and market research.

## 1.2 Methodology

The assessment was conducted through a desk study including in-depth interviews, conducted virtually, with two categories of key informants, namely: (i) Focal Points in entities of the UN Secretariat as well as staff in the Capacity Development Programme Management Office (CDPMO) of DESA.; and (ii) Representatives from other institutions such as academia; United Nations entities with expertise on training such as UNITAR, ITCILO, UNHCR and UNICEF; as well as other relevant for-profit institutions.

The purpose of the in-depth interviews with key informants was to understand the pros and cons of the current capacity development delivery model, to gather inputs on ways to run more efficient blended capacity development trainings in the context of the UN Secretariat, as well as to provide evidence-based recommendations for how to best adapt in-person capacity development trainings to online settings. The study considered the context for relevant beneficiary countries (e.g. LDCs, LLDCs and SIDS), which may face connectivity issues and other technological limitations.

The consultancy undertook a study that led to the development of concepts for new models of delivering training and other technical knowledge to help Member States with the change needed to achieve the 2030 Agenda in areas where the entities of the UN Secretariat have a capacity development mandate. The study includes clear proposals/guidelines for how to run e-learning and hybrid delivery models that maximize the efficiency and effectiveness of capacity development trainings in the context of the UN Secretariat, with an emphasis on reaching a wide audience and achieving sustainable, institutional change. In addition, the assessment provides evidence-based recommendations for how to best adapt in-person capacity development trainings to online settings.

The assessment also looked into best available technologies and best practices in the industry, particularly in light of rapid advances brought forward by Covid-19.

# 2 STUDY OF THE CURRENT SITUATION

## 2.1 High level themes emerging from the review

### 2.1.1 Defining capacity development

The review has identified that *capacity development* as a term that broadly consists of a combination of different methodologies and approaches to improve development outcomes. Formal training events such as workshops and online modules form only a part of the knowledge transfer process. Quite often the training component is used as a methodology to promote or mainstream a new developmental policy or other products. Training also has explicit and implicit goals, particularly on fostering relationship building, networking and exchange of best practices.

Capacity development or building takes place at an individual, an institutional, societal level and non-training level:

- **Individual Level** - Skills, knowledge, experience, attitudes and beliefs
- **Organizational, Institutional and Community Level** - Procedures, frameworks, management systems of organizations and institutions including government, civil society, private sector and local communities
- **Societal or Enabling Environment Level** - Policy framework, legislation, allocation of public resources, societal norms

Capacity development for this report has been summarised under the following activities:

- **Formal training** – in-person and online (self-guided, moderated)
- **Coordination activities & knowledge exchange** - Running meetings, conferences, co-creation workshops and other capacity-building events.
- One-to-one or one-to-many **advisory services**

Almost all projects have been identified with capacity development components, and it is recognised that we need new ways to deliver technical assistance and training. Capacity development is very much about relationship building, which is harder to do online, and guidance has been requested on how to do this effectively and impactfully.

### 2.1.2 Covid-19 pandemic – a need for business continuity and a driver for change

As with the rest of the world and other sectors, Covid-19 has had a massive impact on business continuity at the UN, particularly with regards to face-to-face events (workshops, training, events, meetings, consulting). Some programmes have

already pivoted to using online approaches, while other programmes are struggling to do so and have come to a standstill. Most live events and meetings have been moved to online conferencing tools like Teams and Zoom, but with mixed results. Some also see the pandemic as an opportunity to do things differently:

- To be more inclusive and reach audiences who typically would not attend face-to-face events, e.g. women's participation has gone up in ECA programmes
- To increase efficiency, reduce travel costs and the UN's climate footprint

A need was expressed to better understand how behaviours are changing during Covid-19, and how this impacts the way people are open to working online, e.g. duration of meetings.

### 2.1.3 Adapting to new methodologies

Content that is currently delivered as PowerPoint that covers the "what" is well suited to be delivered via online self-guided modules. However, the "how" of achieving impactful change, should be delivered through other formats. This can still be online, but requires human moderation, activities, technical guidance, sharing & cooperation, etc.

The review found that not enough follow-up is provided after face-to-face events (in-person and online), partly due to the way the projects are funded. There was an interest in implementing remote coaching to support this.

Online learning, sometimes referred to as "eLearning", is often equated to self-guided learning modules. In fact, it is possible to deliver online, interactive capacity development programmes and technical assistance in a moderated and supported manner. It is clear that a number of existing eLearning programmes have been developed in a way to complement current face-to-face programmes, e.g. as prerequisite modules, but will need to be redesigned if they are meant to provide the equivalent outcomes as their face-to-face counterparts.

A better understanding of impact measurement, theory of change, etc. is also needed to understand "why" we are running training in the first place.

### 2.1.4 Switching to virtual events in place of in person interactions

Covid-19 has prompted a number of programmes to move to online webinars, however challenges remain around:

- Guidance on how best to run webinars, e.g. size, duration, format, technology
- Managing webinar fatigue and sustain remote participants' engagement throughout the course
- Challenges when working across different time zones

The options for scale make it tempting to invite thousands of learners to single events. While there is a place for these types of events, more engagement has been found by creating "virtual workshops", i.e. smaller sized virtual events with 25-30 participants that allow for meaningful human interactions.

### 2.1.5 Capacities to deliver online exist, but need strengthening

There are some good examples of capacity to deliver online across entities, however a clear need was expressed around:

- Design – How to design effective capacity development programmes online
- Delivery – How to deliver effectively online
- Evaluation – How to measure and improve outcomes

There were additional capacity issues expressed on:

- Increasing demand – Covid-19 has put pressure on existing online design & delivery teams
- Technical experts (or even trainers) – Who have traditionally delivered face-to-face, require upskilling to the new formats and technologies
- Senior level managers – Need awareness raising on when and where to best apply online methodologies and challenge conventions around the use of eLearning

### 2.1.6 Unclear approach to understanding needs

It was pointed out that all too often formal training (and online learning) for transfer of knowledge is seen as a fix for issues without a full assessment of needs and a clear strategy. Entities then get stuck in a continuous cycle of creating online "content", and it is not clear whether they are having an impact.

### 2.1.7 Technology challenges

While many organisations have either pivoted to using online tools or have expressed interest to leverage new tools, issues persist, including:

- Guidance is needed in terms of selection of tools, e.g.
    - Which learning management system (LMS) to use, e.g. adapt existing platforms from other agencies or set up new instances
    - Which are the best webinar tools Teams, Zoom, GoTo Meeting
    - Which are the best design and authoring tools
- Bandwidth issues remain in most regions. However, examples were cited on the successful use of online learning in programmes in remote locations in Africa and Latin America, using innovative, low-bandwidth approaches.

- Need more flexibility and less institutional constraints as there are blockers from the corporate IT teams to use tools that may be suited for internal staff use, but are harder (or impossible) to use with external audiences, a key need for capacity development.
- Need to be more agile, e.g. language classes moved online but took 5 years to complete the process.

### 2.1.8 Opportunities to learn from within and externally

Some examples of innovation were identified at entities, e.g.

- TrainForTrade (UNCTAD) have been running a number of blended capacity development programmes and knowledge development platforms for years on Trade related components in French, English, Spanish. The Programme is continuously developing new learning tools by exploring new technological opportunities. The TrainForTrade programme develops and delivers online courses using e-learning and mobile-learning. In many developing countries handheld devices are more accessible than computers; hence mobile learning can provide more accessibility to e-learning courses compared to using a computer.
- UN ECA has strong internal capacity, is employing a wide range of online methodologies, platforms and tools, employs instructor-led, self-paced and blended approaches and is even experimenting with mobile and micro-learning and gamification. ECA also offers short webinars for awareness raising, information sharing and knowledge exchange. Online trainings are followed-up with three level of impact assessment: short-term (just after the training), medium-term (six weeks after the training) and long-term (a year or two after the training) to assess the extent to which acquired skills, competencies and techniques are contributing to improved planning, practice, policy and overall economic transformation.
- UNEP has partnered with the UNSSC to develop and run a 5-week online training course with moderators that has a 75% completion rate. They focussed on a performance rather than having a content mindset with more concrete outcomes identified.
- UN-Habitat, through a UNDA project in partnership with ECLAC in Bolivia, Brazil and Peru, used peer-to-peer learning experiences, changed in-person to online, made it inclusive in Spanish and Portuguese with Zoom (with live subtitles and the option of choosing to see the screen of one of two presenters with a presentation in either Spanish or Portuguese), polls, virtual icebreaker activities, co-creation activities in breakout rooms, and collaborative

brainstorming through the use of digital workspace tool Mural.

Ideas for cooperation across entities include:

- Enhance internal UN capacities in online design and delivery, e.g. project managers and subject matter experts
- Establishing UN-wide corporate contracts for design and delivery
- Running a virtual conference for sharing best practices

### 2.1.9 Measuring impact

During the review it was pointed out that the impact of capacity development programmes and learning interventions were difficult to measure or were not being measured. In addition, it was clear that the process of conducting M&E had issues as almost all trainings had positive ratings in one instance, possibly driven by participant motivation to attend future face-to-face events. Guidance around incorporating M&E mechanisms for capacity development were requested.

However, some programmes, e.g. at UN ECA, do run short to long-term impact assessments through surveys of alumni to assess the extent to which the acquired competence and skills have helped to influence policy, practices and further economic growth. These surveys are implemented just after the on-line training, then six months later, a year after and three years after.

### 2.1.10 Adapting DA models

Feedback was also provided around the DA delivery mechanism for projects. A new model was suggested that could incentivise and include:

- Adopting blended online methodologies
- New capacity development approaches for non-resident agencies

## 2.2 Understanding Learning at other UN agencies

To learn from external partners and identify good practice in the sector, as well as identify opportunities to collaborate, a series of interviews were undertaken with learning & capacity development leads at other UN organisations (UNITAR, UNHCR, UNICEF and ITCILO). The findings from these interviews suggest that newer approaches in learning have progressed at a fast pace at these organisations. These include:

### 2.2.1 Use of integrated digital learning platforms

A number of UN agencies have harmonised learning catalogues (for eLearning, face-to-face and blended training). These include:

- UNHCR's Learn & Connect platform http://learn.unhcr.org/

- UNICEF's Agora Platform https://agora.unicef.org/
- ITCILO's eCampus https://ecampus.itcilo.org/
- UNITAR's Learning Catalogue https://www.unitar.org/event/full-catalog

### 2.2.2 Use of digital learning to reach staff and partners at scale

This goes beyond self-guided learning, e.g. complex learning programmes are now designed, delivered and facilitated online, including the use of coaching & mentoring and support from peers and tutors. As an example, while UNHCR has traditionally offered a number of its flagship programmes in a blended format, the Leadership unit is currently offering fully online and facilitated programmes on innovation, leadership and diversity & inclusion.

### 2.2.3 Advances in data-driven Monitoring Evaluation & Learning (MEL)

All the agencies listed above are using their digital platforms to automate the evaluation processes, e.g. to capture learner feedback. Some are going further and combining data from the learning platforms with other operational data to measure learning impact.

### 2.2.4 A move towards lighter, more agile learning methodologies

UNICEF is moving away from cumbersome learning programmes to a combination of standalone online modules and locally-run workshops. It is also exploring new and innovative methodologies to add to its online offer.

### 2.2.5 An increased use of innovative approaches including virtual reality (VR) and gamification in learning

Organisations such as ITCILO have been expanding their use of immersive learning methods such as:

- Virtual reality https://virtualreality.itcilo.org/
- Gamification https://gamification.itcilo.org/

## 2.3 Learning and Development (L&D) Trends

### 2.3.1 OECD report (The potential of online learning for adults: Early lessons from the COVID-19 crisis)[1]

The COVID-19 crisis has resulted in a significant increase in online learning by adults. Much of the training that had started as face-to-face in classroom environments has been pursued online. Furthermore, individuals are being encouraged to use the time freed up by short-time work schemes to take up new training. As such, the crisis provides a powerful test of the potential of learning online. It also highlights its key limitations, including the prerequisite of adequate digital skills, computer equipment and internet access to undertake training online, the difficulty of delivering traditional work-based learning online, and the struggle of teachers used to classroom instruction. This report discusses the potential of online learning to increase adult learning opportunities and identifies some key issues that the crisis has highlighted.

Key findings from the report relevant to this study:

- **Expanding adult training provision through online learning** would have significant advantages. In particular, online learning could help reach a much bigger number of learners with a smaller investment in education infrastructure, making it a cost-effective solution.
- **Developing basic digital skills** will be instrumental to the mainstreaming of online learning.
- **Motivating online learners** is key to retention. Evidence from Massive Open Online Courses (MOOCs) shows completion rates as low as 10%. In addition to basic digital skills, online learning requires autonomy and self-motivation.
- **Broadening the range of online courses** is crucial to make online learning more inclusive.
- **Strengthening the digital infrastructure** is a fundamental context factor for online learning to be a viable option in the delivery of online learning to a broader group of adults. Unequal access to the Internet risks exacerbating existing inequalities in education and training.

1 https://www.oecd.org/coronavirus/policy-responses/the-potential-of-online-learning-for-adults-early-lessons-from-the-covid-19-crisis-ee040002/

- **Training educators to deliver online courses** effectively is important to raise the quality of online courses.

### 2.3.2 Broader learning trends

While there has been a steady increase in the uptake of online and blended learning both within and outside of the development sector, a number of new approaches to training may help to bridge gaps between highly engaging face-to-face learning programmes and unsupported self-guided e-learning products. These could include well researched[2] uses of immersive learning (virtual and augmented reality) to support crisis immersion, emergency simulation exercises and gamification to support practice-based learning, leadership development, coaching & mentoring and other soft-skills.

Another approach is "action learning" which some DA programmes are already applying. Action learning encourages training participants to apply acquired knowledge and skills on-the-job, through project implementation. Learner behaviours change as a combination of the knowledge and skills from the training as well as on-the-job application.

Such learning projects can be mentored by external peers in the same field rather than by supervisors.

The entities can leverage new approaches to credentialing using Open Badges for scalable and trusted digital credentials that serve the needs of individuals, learning providers and implementing organisations. Modern data-driven measurement approaches and learning analytics based on real-time learning data is more feasible to implement than it was even two years ago.

While the entities do not need to adopt all leading-edge learning approaches and technologies, there are opportunities to pilot a number of these as part of a broader blended learning approach.

Some of the relevant trends are elaborated with examples under Section III. "Guidelines for New Capacity Development Models" (E. Technology).

2 https://vhil.stanford.edu/

# 3 GUIDELINES FOR NEW CAPACITY DEVELOPMENT MODELS

## 3.1 Recommended principles

The following guiding principles are recommended for digitisation strategies as best practice from the Principles for Digital Development[3].


- **Design With the User** - User-centered design starts with getting to know the people you are designing for through conversation, observation and co-creation.
- **Understand the Existing Ecosystem** - Well-designed initiatives and digital tools consider the particular structures and needs that exist in each country, region and community.
- **Design for Scale** - Achieving scale requires adoption beyond an initiatives pilot population and often necessitates securing funding or partners that take the initiative to new communities or regions.

[3] https://digitalprinciples.org/principles

- **Build for Sustainability** - Building sustainable programs, platforms and digital tools is essential to maintain user and stakeholder support, as well as to maximize long-term impact.
- **Be Data Driven** - When an initiative is data driven, quality information is available to the right people when they need it, and they are using those data to take action.
- **Use Open Standards, Open Data, Open Source, and Open Innovation** - An open approach to digital development can help to increase collaboration in the digital development community and avoid duplicating work that has already been done.
- **Reuse and Improve** - Reusing and improving is about taking the work of the global development community further than any organization or program can do alone.
- **Address Privacy & Security** - Addressing privacy and security in digital development involves careful consideration of which data are collected and how data are acquired, used, stored and shared.
- **Be Collaborative** - Being collaborative means sharing information, insights, strategies and resources across projects, organizations and sectors, leading to increased efficiency and impact.

Read more about the principles here: https://digitalprinciples.org/principles/. There are a number of useful downloadable resources including design files, print-outs, and presentations that can be used in workshops or trainings.

The "Design with User" principle or the user perspective is especially important to keep in mind through the following questions:

- Does the learning cover a genuine need for the user?
- Are there issues of accessibility, e.g. language, location bandwidth, disabilities, are catered for?
- Are the platforms and tools are ease to discover, access?
- Do users have sufficient support?
- Is the user feedback captured throughout the design and implementation lifecycle, and iteratively used to improve the outcomes?

## 3.2 Analysis and Design

Feedback from the review highlighted the need for more robust approaches to understanding needs prior to developing new capacity development and training programmes. The following models are listed below that can be used independently or in combination to analyse user needs, understand problems and generate ideas and solutions.

### 3.2.1 ADDIE Model

The ADDIE model is the generic process traditionally used by instructional designers and training developers. The five phases—Analysis, Design, Development, Implementation, and Evaluation—represent a dynamic, flexible guideline for building effective training and performance support tools. While perhaps the most common design model, there are a number of weaknesses to the ADDIE model which have led to a number of spin-offs or variations. (https://www.instructionaldesign.org/models/addie/).


When to use:

- Designing new training programmes and capacity development interventions
- Combine with design thinking (below) to make sure the training is based on user needs

Resources:

**1. ITCILO Learning Cycle**

https://compass.itcilo.org/learning-cycle/

The Learning Management Cycle guides you through the five fundamental elements of building a learning or training activity, from the initial assessments of requirements, through design, development and implementation, right up to post-activity evaluation.

## 3.3 Design thinking

Design thinking is a non-linear, iterative process that teams use to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test. Involving five phases—Empathize, Define, Ideate, Prototype and Test—it is most useful to tackle problems that are ill-defined or unknown. (https://www.interaction-design.org/literature/topics/design-thinking)


When to use:

- Co-creating new products and solutions from stakeholder's perspective, particularly where the problems are not clearly defined
- Useful to understand end user needs by involving them through the process
- Rapidly prototyping and testing new ideas and solutions

### Resources:

**1. Concept building toolkit**

https://www.humanitarianleadershipacademy.org/innovation/toolkits/

This is the first in a set of toolkits to create user-driven, innovative learning resources in new and emergent formats. The toolkit will help you build innovative learning resources using Human Centred Design (HCD) tools.

**2. Nesta DIY toolkit**

https://www.nesta.org.uk/toolkit/diy-toolkit/

This is a toolkit on how to invent, adopt or adapt ideas that can deliver better results. It features 30 practical social innovation tools that are quick to use and simple to apply.

## 3.4 Futures studies and Foresight

Futures is an umbrella term for tools like horizon scanning, trend analysis and scenario planning. These methods are used to analyse emerging trends, anticipate their impact and build stories about possible futures. They can identify key steps to move towards the preferred future scenarios (through backcasting and other techniques).

When to use:

- Strategy workshops to imagine future scenarios (positive and negative)
- New policy and programme development
- Stakeholder engagement

Resources:

**1. Nesta resources**
https://www.nesta.org.uk/feature/innovation-methods/futurescoping/

**2. UNDP Foresight manual**
https://www.undp.org/content/undp/en/home/librarypage/capacity-building/global-centre-for-public-service-excellence/ForesightManual2018.html

**3. Red Cross Solferino Academy** https://future-rcrc.com/

**4. Humanitarian Futures and Foresight (in partnership with Institute for the Futures)**
https://kayaconnect.org/course/info.php?id=1142

## 3.5 Content

While content by itself is not learning, it forms a key building block in developing blended programmes. Providing high quality knowledge and learning content is critical in helping capacity development programmes disseminate new policies, data and research. Ideally, the goal should be to aggregate and contextualise existing learning material; and where needed, develop new learning material to fill gaps, so "aggregate first, build last". This is already being done by a number of entities and could include the following activities:

### 3.5.1 Aggregate and adapting existing resources.

Conduct detailed mapping of learning resources available and make this available to all entities and programmes. Ideally the mapping is easily updated and can be crowd sourced. Adapt existing training material to the local (or different) contexts to ensure that it is relevant and accessible, for example by translating it into local languages.

A robust assessment process will assess the quality, relevance and effectiveness of content mapped. This can be done using a Learning Assessment & Evaluation framework that allows us to assess how impactful, effective and satisfactory learning is for users. Ensure quality through rigorous evaluation of learning content. Periodic impact evaluations, strategic reviews, timely monitoring feedback and deeper dive learner assessments will probe the effectiveness in driving change, better developmental outcomes and practice.

### 3.5.2 Develop new content locally for key gaps in learning material and resources.

After mapping, building on existing resources and identifying gaps, the goal should be to fill these gaps by working with local partners. New content should be co-developed locally with partners, especially with UN country teams and training institutes.

### 3.5.3 Modularisation and bite-size content

As the review has identified a number of existing online modules, modularisation makes it a lot easier when designing and delivering learning in a variety of formats and methodologies. This will allow for consistency of content and messaging, and at the same time allows trainers flexibility and creativity when designing and delivering learning for different audiences in a variety of contexts and styles.

In addition, short, interactive, bite-size micro-learning e.g. short videos from practitioners from recent programmes can be used to complement more formal content.

### 3.5.4 Opportunities for sharing, rationalisation across entities and beyond

There are ample opportunities for sharing content (or at least the awareness of existing content)

between entities and other UN agencies, e.g. UNSSC, UNITAR, ITCILO. Areas for cooperation include:

- MoUs for content, technology and expertise sharing
- Piggy-backing on contractual arrangements with eLearning providers established by other UN agencies
- A virtual conference on sharing of best practices online
- Leveraging existing, well established learning platforms (see Resources)

### 3.5.5 Emerging content areas

Training needs will evolve over time depending on the programme outcomes and broader trends, e.g. a need for soft-skills (public leadership, negotiations, cross-cultural communications, leveraging social media) as well as technical skills (working with big data and AI). eLearning can be used to rapidly upskill on some of these areas, including soft-skills. An aggregation approach, with minor adaptation is recommended as many other sectors are also seeing the increase in the use of soft-skill training.

Resources:

**1. Future skills to consider (HLA and Handshake)** https://handshake.fyi/index.php/case-study-the-future-of-skills-in-the-humanitarian-sector-with-humanitarian-leadership-academy/

**2. Top soft skills in 2020** https://www.linkedin.com/business/learning/blog/top-skills-and-courses/the-skills-companies-need-most-in-2020and-how-to-learn-them

**3. Free to access learning resources**
https://www.speexx.com/speexx-blog/free-resources-covid19

**4. Existing eLearning platforms and content**

**UNCTAD**

- TrainForTrade - https://tft.unctad.org/ The Programme focuses on developing skills, knowledge and capacities through innovative development approaches based on a recognised pedagogical method and state-of-the-art technological solutions.

- Virtual Institute - https://vi.unctad.org/

**UN Statistics**

- eLearning platform - https://elearning-cms.unstats.un.org/

**UN DESA**

- UN Public Administration Network - A global network that connects relevant international, regional, sub-regional and national institutions and experts worldwide.

- ePing - It is the result of three international organizations, the United Nations Department for Economic and Social Affairs (UNDESA), the WTO and the International Trade Centre (ITC), combining their expertise and experience to facilitate easy access to pertinent trade information: product requirements in foreign markets.

- Global Climate, Land, Energy & Water Strategies (CLEWS) - Provides useful insights about the relationships among water, energy, climate, and land and material use at the global scale.

- Financing courses - https://www.un.org/development/desa/financing/capacity-development/online-courses

**ECLAC**

- https://www.cepal.org/en/training

- https://www.cepal.org/en/topics/covid-19

- https://www.cepal.org/en/observatorios

- https://agenda2030lac.org/es

**ESCAP**

- SDG Helpdesk which is a one-stop online service providing access to Sustainable Development Goal (SDG)-related tools, knowledge products, data portals, expertise, advice and opportunities for peer-learning and regional South-South cooperation through thematic areas, covering a multitude of topics.

**UN ECA**

- IDEP eLearning Platform - http://services.unidep.org/e-idep/

- UN ODC - https://www.unodc.org/elearning/

**UN-Habitat**

- https://learn.urbanagendaplatform.org/

**Other UN Agencies**

ITCILO - https://ecampus.itcilo.org/

Agora (UNICEF) - https://agora.unicef.org/

Learn & Connect (UNHCR) - http://learn.unhcr.org/

UNSSC - https://newunkampus.unssc.org/

**Humanitarian**

Kaya - https://kayaconnect.org/

DisasterReady.org - https://www.disasterready.org/

**Other open platforms**

Coursera - https://www.coursera.org/

EdX - https://www.edx.org/

Udacity – https://www.udacity.com/

Edraak (Middle East) - https://www.edraak.org/en/

## 3.6 Methodology

It is clear that a wide range of approaches and methodologies are required to make capacity development and learning effective online. Finding effective ways to bring content to life through human interaction, practice-based experiences, participatory exercises, co-creation and feedback are key elements of moving from knowledge sharing to learning.

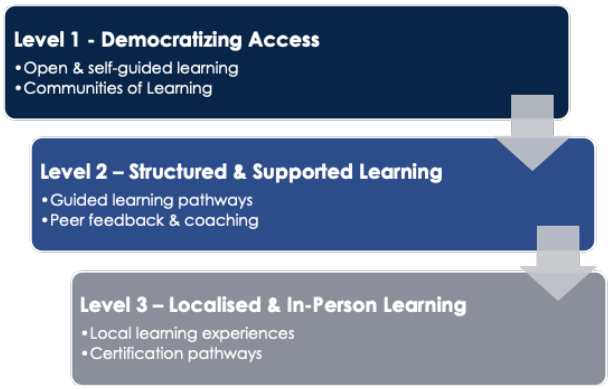
### 3.6.1 Flexible and scalable learning models

There is an increasing need for learning to be designed for scale and sustainability. This means that the provision of learning must be designed for global reach and driven by the needs of learners. The learning models need to be flexible and match learners' interests, potential time commitment and learning style. This is why a number of levels of learning have been identified, ranging from simply providing open access to content, to an in-depth engagement with the learner in a more traditional training setting. **Please note that these levels are only illustrative of different types of learning access and can overlap or can be combined:**

- **Level 1 – Democratizing Access.** At the first level, learners have access to open self-guided learning (or content). In this model, learners access resources and materials at their own pace and based on their own needs and interests. This type of learning will take place using resources made available online and through the formation of communities of practice. Exchange of best practices and sharing can be encouraged through the creation and moderation of communities of practice. These will serve to exchange knowledge and experiences in forums that are driven by individuals' interest areas.

- **Level 2 – Structured, supported and social learning.** At the second level, the learners are guided through a learning pathway with interaction with other participants, trainers and facilitators. The programmes can build on each other to allow participants to move upwards from one level to the next. In this more engaged form of learning, online services will enable participants to share and exchange learning and experiences with others on their programme. Participants will also be encouraged to give and receive feedback from peers and online coaches. Once a programme is finished, learners could receive certification of their new skills and expertise through online badges. Programmes could promote this level as it provides effective learning through interactive feedback and coaching yet is easier to bring to scale than in-person training.

- **Level 3 – Localised and in person learning.** At the third level, learners can take part in a blended learning approach that includes levels 1 & 2, combined with face-to-face training in a contextualised setting. These learning opportunities can be provided by local, quality assured institutions. Local partners will be key to linking learners with local learning and development providers. In addition, online platforms can also provide links to quality assured capacity development institutions and programmes.




The study found that while online resources exist on various entity platforms (level 1), and substantive amount of face-to-face training is carried out (level 3), more needs to be done with online, structured, supported and online approaches (level 2). This will help particularly during Covid-19 to scale human-supported, facilitated learning. Level 2 can also be combined with Level 3 to contextualise and localise the training, e.g. a remote, blended online programmes run by local trainers, focussed on the needs of a specific country programme.

### 3.6.2 Use social online learning as a real alternative to face-to-face human exchange (particularly during Covid-19)

Currently online learning is defined by self-guided content or live events at scale. There is a real need to use technology to create meaningful human exchange through smaller group discussions, one-to-one human exchange and co-creation of outputs. This requires using the same expertise, resources, etc. when designing and facilitating face-to-face events, and additionally requires expertise on online design and facilitation. A number of useful resources have been shared below for this, including on ensuring inclusiveness in online meetings.

### 3.6.3 Measuring impact

When designing capacity development programmes, it is important to establish effective strategies for measuring, evaluating and learning (MEL) to identify which interventions are most effective and make improvements. This includes aggregating and analysing real-time information from programmes as well as producing rigorous insights from evaluations, peer reviews and research that demonstrate what works, and importantly what does not work. A few approaches to evaluation are listed below:

- **Kirkpatrick model -** A widely used evaluation model for training, it is used for measuring learning effectiveness at 4 levels:
    - **L1 - Reaction** – feedback from participants after training. On learning

platforms, this can be easily automated with a follow-up survey. Survey completion can be incentivised by issuing digital completion certificates only after completion of the evaluation.

- **L2 - Learning** – to measure learning transfer. Most learning platforms will support the setup of pre and post-tests/quizzes as well as observation checklists to measure learning transfer.
- **L3 - Behaviour** – Follow-up surveys to measure behavioural change. Some of the learning platforms will support L3 surveys which are sent to learners as well as managers or colleagues as a 360 survey
- ·**L4 - Results** – Did the training influence performance. A few of the LMS platforms will support this, but this process also involves compiling other performance data, e.g. overall emergency response quality, and cross-analysing this against the learning data

At a minimum, it is recommended to include level 1 and 2 evaluations for all training conducted, and level 3 and level 4 for more substantive programmes.

- **Data driven learning design -** New approaches that use real-time data to iteratively design, measure and improve learning are increasingly being used. This allows for making changes to the training while it happens, and is well suited for modular, bitesize and continuous learning opportunities. It is also easier to incorporate data driven learning design into online platforms due to the data being generated on the online platforms such as:
  - User demographics, e.g. location
  - Training type, e.g. online, blended
  - Training history data, e.g. training registrations, completions
  - Aggregated evaluation data, e.g. overall satisfaction with certain types of methodologies
  - User engagement data, e.g. how long users spent on a training or dropped out

Resources:

**1. UNITAR**

https://unitar.org/learning-solutions/online-learning-solutions

Online learning solutions (making learning more inclusive, turning face to face learning to online)

**2. Social learning approach (HLA and Sea Salt Learning) -**

https://www.humanitarianleadershipacademy.org/our-learning-approach/social-learning/

The Learning Architecture is a set of guidelines to help us design and deliver effective learning. It's not a checklist nor a set of rules that we have to follow exactly. It's a set of ideas that we should think about and guidance for how we can design learning so that it's engaging and most importantly effective.

**3. ITCILO Compass**

https://compass.itcilo.org/

A useful guide of methodologies to make training and capacity development exercises more participatory

**4. Online workshop energizers**

https://www.mural.co/blog/online-warm-ups-energizers

**5. Power Dynamics and Inclusion in Virtual Meetings**

https://aspirationtech.org/blog/virtualmeetingpowerdynamics

Important discussion on power dynamics associated with virtual meetings.

**6. Remote Collaboration - Facing the challenges of COVID-19 – working -**

https://www2.deloitte.com/content/dam/Deloitte/de/Documents/human-capital/Remote-Collaboration-COVID-19.pdf

Useful toolkit from Deloitte on switching to remote

**8. Lessons learned from design sprint that was run at the start of the pandemic with NRC**

https://www.gamoteca.com/2020/07/16/what-we-learned-from-running-three-virtual-learning-hackathons-during-covid/

**9. Shifting conferences online**

https://www.insidehighered.com/advice/2020/03/16/how-shift-your-conference-online-light-coronavirus-opinion

**10. Measuring impact**

https://educationaltechnology.net/kirkpatrick-model-four-levels-learning-evaluation/

Kirkpatrick model -

**11. Data driven learning design**

https://www.slideshare.net/davidblake/getting-started-using-datadriven-learning-design

## 3.7 Technology

### 3.7.1 Learning Management Systems (LMS) or Online platforms

The role of Learning Management Systems (LMS) or learning platforms varies depending on the organization's objectives, online training strategy, and desired outcomes. However, the most common use for LMS software is to deploy and track online and face-to-face training initiatives. Typically, learning content and activities are uploaded to the LMS, which makes them easily accessible for the learners.

The main role of an online learning platform is to:

- Encourage flexible learning, at the level and pace that suits each individual, and
- Provide a space for sharing and exchange between individuals, organisations, and learning and development providers.

Learning platforms can be proprietary or open source. The most commonly used open source platform is Moodle and is used by a number of UN organisations and academia.

The table below illustrates some of the key differences between open-source and proprietary LMS platforms.

| | Open Source LMS platforms (Moodle) | Proprietary LMS platforms |
|---|---|---|
| Overview | Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments. With a strong community backing, it is one of the world's leading open source LMS solutions. | These are LMS platforms with licensing fees and closed code. Subscriptions and license fees are required for access. They have usually evolved from talent and HR management systems, are usually intended for internal staff audiences and include (or link to) capabilities such as performance management and recruitment. Examples include Blackboard, Cornerstone OnDemand, Docebo. |
| User Experience (UX) | Out of the box Moodle has a simple design and limited UX features, and usually needs more upfront investment to launch. The advantage is that it is easier to adapt the look and feel and make improvements to the UX, e.g to the search or catalogue features. | Usually have better UX and design out-of-the-box and require less upfront investment. There is less flexibility in adapting look and feel, although adding a skin (colour scheme) and logo is not complicated. |
| Development | High up-front development | Usually no upfront development as the code cannot be changed |
| Hosting | Needs to be managed internally with the IT team or with an external hosting provider using a service such as Amazon AWS or Google Cloud | Is managed by the provider |
| Technical Support | Global community of Moodle developers | Provided by the company |
| Flexibility | Allows for complete customisation of the platform. Downside is that heavy customisation can impact cost of future Moodle upgrades | Limited customisation usually tied to broader product roadmap informed by customer needs. Upside, is that the client does not need to worry about the process or costs. |
| Scalability | Unlimited with no license implications | Number of users will impact costs |
| Integrations | No limit to integration. There is a community of open source plugins what make it easier to integrate with 3rd party tools, e.g. Zoom: https://moodle.org/plugins/ | Will allow for integrations, but more limited than Moodle. |

| | | |
|---|---|---|
| Capacity requirements | Require an internal (or outsourced) team to manage the Moodle instance hosting, upgrades, security patches, etc | Less staff requirements. |
| Costs (licensing) | Free | Usually charged on a per user basis, so can be expensive if accessed by larger numbers of users |
| Costs (setup) | High set up costs, although efficiency gains can be made by tapping into customisations and set up by other organisations from the open source community | Lower set up costs |
| Costs (hosting) | Costs for managing the hosting | Usually covered as part of license costs |

**Additional comments on LMS:**

- Moodle's business model seems to be evolving. While it is committed to retaining its open source model, it is also starting to offer a corporate version of Moodle LMS to clients (https://moodle.com/workplace/). A comparison of Moodle and Moodle Workplace can be found here: https://moodle.com/wp-content/uploads/2020/05/Product_Comparison_MoodlevsWorkplace-1.pdf
- Moodle has started to offer Moodle Cloud (https://moodle.com/moodlecloud/ ) to clients who do not want to manage their own hosting.

### 3.7.2 Use existing platforms where possible

A decision a number of programmes need to make is whether to build a new or use an existing platform. Depending on the needs of the programme, it may be simpler to simply leverage an existing LMS, and focus the programme budget on developing the content, methodology and activities instead of setting up another platform, that needs to be maintained. E.g. a number of UN DA programmes leverage UNITAR and UNSSC platforms.

### 3.7.3 Types of activities that can be made available on an online platform

A learning management system is simply a catalogue, and delivery mechanism

- **Live events or seminars –** with presentations, discussions, etc.
- **Learning materials (content)** that can be openly accessible and used for self-paced learning at the level deemed suitable by the learners. The materials can be both international (as adapted/developed by the UN) and locally adapted (as adapted/developed by local partner organisations). Local partners adapt content tailored to the specific needs of their learners.
- **Learning programmes or Massive Open Online Courses (MOOCs)** can be provided for more engaged learning at scale, that could have a curriculum that maps onto a skills framework. The learner can choose a programme depending on their level, and the skills and expertise acquired is recognised at the end of the programme by a learning badge. MOOCs can reach a larger number of learners, while offering assessments and group activities.
- **Communities of practice and interactive forums** to provide learners with opportunities to engage with others. Participants can be encouraged to exchange their experiences and knowledge and to give and receive peer-to-peer feedback. Continuous sharing and learning can be facilitated through exchange between participants based on specific areas of interest or goals.
- **Coaching and mentoring** can be provided to encourage participants to think of their work and learning as part of a career progression.
- **A marketplace for training** that provides a comprehensive online catalogue of quality assured events, materials, programmes, training providers, etc.

### 3.7.4 Low-bandwidth solutions

To support learners in low-bandwidth countries, learning solutions could include:

- Using **messaging platforms** such as WhatsApp, WeChat, Viber and Telegram to provide supported learning and coaching to groups of users

- Using learning platforms based on **text messaging**, e.g. Arist and Eneza (see resources)
- Use of **radio and television** for education programmes
- **Provide last-mile learning solutions** – This means supporting the learners digitally downstream as far as possible, e.g. educators who may have access to internet or tablets, and then providing them with the tools, materials and activities to support the "last mile" learners who lack access to connectivity

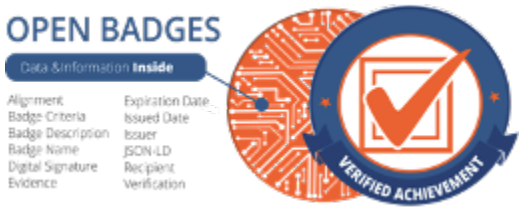
### 3.7.5 Mobile and offline access

As more people use mobile devices to access the internet for learning, LMS providers like Moodle have developed mobile apps to increase learners' experiences and make the classroom as easily accessible on mobile devices. Over the last three years, Moodle has seen over 200% increase in installations for the Moodle Mobile App, reinforcing the trend towards mobile learning.

The latest features of Moodle Mobile 3.1.3 include offline support functionality, allowing users to participate in the majority of activities in the app when they are not connected to a network. Previously, the offline capability in Moodle Mobile only extended to quizzes and SCORM (content). Now learners can also private message other users, add a course note, complete a survey, create a new forum post or new wiki page and even complete an assignment offline. The app integrates results when users are back online. This feature will be of particular use to those with limited internet access, ensuring that being offline is not a barrier to accessing learning.

### 3.7.6 Open Badges for credentialing

Learning and capacity development programmes can leverage new approaches to credentialing using Open Badges . Open Badges is the leading format for digital badges. Open Badges is not a specific product or platform, but a type of digital badge that is verifiable, portable, and contains the information about skills and achievements. The Open Badges standard is a free and open specification available for adoption. This can be a lighter and more gamified approach to recognising the training, skills and experience of experts.




A good example of Open Badges for skilling is the Humanitarian Passport (https://hpass.org/) platform. The platform uses trusted digital credentials that serve the needs of individuals, learning providers and implementing organisations in the humanitarian sector.

### 3.7.7 Emerging technologies

The eLearning market is rapidly evolving with new trends always on the rise. Although most learning technologies have been around for years, the challenge is curating these technologies into innovative and effective learning programmes that will help achieve business goals.

The technologies most relevant in the near term for the DA programmes include:

- **Modular Short Courses** - Learning providers have access to a massive amount of content. From traditional resources through to vast tranches of online knowledge, including MOOCs, Open Educational Resources (OERs), podcasts, videos, blogs, and webinars. Curating and making these resources accessible, tailored to the needs of a particular course and relevant to learners is the challenge.
- **Micro Learning** - It is getting harder and harder to keep learners interested and interacting with learning material. The idea behind micro learning is that people learn better and quicker in smaller chunks.
- **Mobile Learning** - Mobile learning offers numerous benefits, including scheduling flexibility, portability, and access to more content.

These emerging technologies offer additional opportunities to engage participants:

- **Gamification** - Gamification takes the fun playfulness of games and applies it to real-world challenges; it surpasses the mere entertainment factor and ventures into creating solutions that combine business and training with game design.
- **Virtual Reality (VR)** – While applications in the fields of medical training and emergency management are the most obvious, the increased use of VR for soft-skills is on the rise (see Safeguarding VR example in resources).
- **Artificial Intelligence and Personalisation** - Artificial intelligence in education is a significant technology which helps education in a number of ways. Personalized learning is one of the most important areas of education that has used artificial intelligence. In personalized learning, AI helps you to find the best course material for you based on your identity, interests and your way of learning.

## Resources & Tools:

**1. Examples of Gamification**

- ITCILO

https://gamification.itcilo.org/

- Humanitarian Leadership Academy

https://www.humanitarianleadershipacademy.org/innovation/gamification/

**2. Virtual Reality**

- ITCILO - https://virtualreality.itcilo.org/

- Humanitarian Leadership Academy https://www.humanitarianleadershipacademy.org/innovation/360-films-virtual-reality/

**3. Chatbots in learning (AI)**

https://www.humanitarianleadershipacademy.org/innovation/artificial-intelligence-in-education-chatbots/

**4. List of open source LMS platforms**

https://elearningindustry.com/top-open-source-learning-management-systems

**5. Comparison of open source vs proprietary learning platforms:** https://elearningindustry.com/assessing-return-on-investment-open-source-vs-proprietary-lms

**6. Low-bandwidth solutions**

https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic

https://elearningindustry.com/create-elearning-accessible-to-learners-limited-connectivity-5-tips

**7. Text-based learning platforms**

- Text message learning platform
https://www.arist.co/

- Eneza Education :Edtech company in Kenya, Ghana and Ivory Coast that offers material via basic feature phones - https://enezaeducation.com/

**8. Future eLearning Trends**

https://learnosity.com/4-emerging-trends-in-corporate-elearning/

https://elearning.adobe.com/2019/03/10-emerging-technologies-e-learning/

https://elearningindustry.com/future-of-online-learning-modular-tailored-versatile

**9. Moodle Mobile**
https://moodle.com/news/online-learning-can-access-offline-welcome-moodle-mobile-3-1-3/

**10. Webinars -** Have seen the biggest growth in usage during the pandemic, in particular Zoom. While MS-teams is available to all UN staff, it is difficult to invite external attendees. Here is a list of other webinar tools, a further comparison can be found here. (It is noted that a number of these conferencing tools require special permissions or requests to the UN IT team)

- Zoom for reliable, large video calls

- Google Meet for G Suite users

- GoToMeeting for professional features

- Join.me for a lightweight option

- Webex for whiteboarding

- Slack for calls from your team chat app

- Interprefy to support remote simultaneous interpreting

**11. Running online workshops**

Zoom (or MsTeam, Webex) with

- Breakout rooms

- Polls

- Mentimeter for audience participation with Wordcloud, Slider, Quiz (or other tools like Sli.do and Kahoot)

- Google Jamboard – to use as a whiteboard (other tools like Miro, Mural, Padlet)

Mmhmm for enhanced presentations (in macOS beta October 2020)

**12. Running conferences -** Hopin is an online events platform where you can create engaging virtual events that connect people around the globe. - https://hopin.to/

**13. Authoring tools -** An authoring tool is software that enables the creation and arrangement of content into a standardized course structure. This structure can then be exported in several different multimedia types. For those in eLearning, the most common output is to the SCORM format. With authoring tools, you create a zip package that easily uploads to the SCORM compliant learning management system (LMS) or learning platform. Some commonly used authoring tools include Articulate Storyline 360 and Rise, Adobe Captivate, Elucidat, iSpring, Camtasia

**14. eLearning authoring tools reviews**

https://elearningindustry.com/directory/software-categories/elearning-authoring-tools

https://www.learnupon.com/blog/top-authoring-tools-elearning/

**15. Online collaboration tools -** https://resources.workable.com/tutorial/collaboration-tools

## 3.8 Capacity to Deliver

This intervention below will be most helpful for capacity development programmes that include a strong training component, and require the rethinking and adaptation of face-to-face activities such as online training, webinars, etc.

### 3.8.1 Upskilling experts on training skills, particularly on online delivery

The review identified that most capacity programmes and training are delivered by technical experts within their domains. However, the vast majority of them have not been trained on educational methods (pedagogies), let alone educational technologies. Providing adult learning, training design and facilitation skills to these trainers will help them improve the quality of the training programmes, while making the shift to online easier. A number of online resources are available, while organisations like UNSSC and ITCILO have programmes to support with upskilling on online learning design and delivery.

### 3.8.2 Learning and development providers

Entities can partner with quality assured learning and development providers and national training institutes to deliver capacity development programmes. Partnering with qualified providers will allow programmes to reach a larger segment of the development sector and build on existing learning and development providers' experience in training and skill building. This model will be cost effective and sustainable.

### 3.8.3 Provide dedicated, professional learning expertise as a resource

Providing access to in-house technical learning consulting services can help technical programmes scale up their programmes more rapidly, while keeping costs of external consultants lower. External vendors can still be commissioned but the inhouse team can manage a dedicated platform, standardised tools, quality and consistency to methodology & approach, and establishing organisation-wide contracts and framework agreements.

#### Resources & Tools:

**1. Creative learning:** Make your e-learning stand out (HLA) - https://kayaconnect.org/course/info.php?id=1207 – Resources on how to create an effective and impactful e-learning course on installing emergency shelters during a humanitarian crisis.

**2. ITCILO:** Trainer Certification programme - https://www.itcilo.org/courses/training-trainers-certification-programme-0

**3. UNSSC:** From in-classroom training to e-learning: A hands-on workshop - https://www.unssc.org/courses/classroom-training-e-learning-hands-workshop/

## 3.9 Scenarios

The following scenarios will help to illustrate what components (content, methodology, technology, capacity) can be combined to develop a blended learning programme.

### 3.9.1 Webinar series

The purpose of a webinar series:

- Technical experts share best practices
- Foster sharing and encourage networking

**Design**

- Instruction designer works with technical experts to design a methodology (duration, activities, format, etc) and create a regular pipeline of speakers
- Webinar series posted on a learning platform, e.g. https://kayaconnect.org/course/info.php?id=2248 and communicated via newsletters, mailing list, etc
- Pair the speakers with an online facilitator who is comfortable with tools, creates engagement (polls, break out rooms, interactive activities), records sessions and posts them
- Facilitator introduces session, speaker, tools that will be used (10 mins)
- Speaker presents, includes polls, audience participation, e.g. with Mentimeter (30 mins)
- Participants break into 5 virtual tables/breakout rooms to (30mins)
    - get to know each other
    - discuss and collect ideas on a virtual whiteboard, e.g. Google Jamboard
- Reconvene, speaker and facilitator debrief based on outputs from breakouts (15 mins)
- Participants evaluate each session at the end for technical and learning design quality
- Number of participants
    - 30 maximum (more participatory activities)
    - More than 30 (less participatory activities)

**For low-bandwidth settings**

- Video can be turned off (or quality can be reduced) during live sessions
- Sessions can be recorded, and played later by participants (downloaded or buffered)
- Engagement with participants, e.g. Q&A, can be done using chat

### 3.9.2 Online blended programme

Creation of an online, blended version of a 5-day workshop. The purpose of the programme would be to:

- Understand the fundamentals of a technical area, e.g. trade
- Include participatory exercises

**Design**

- Instructional designer works with trade experts to design a methodology (duration, activities, format, etc). See example of a facilitation guide: https://docs.google.com/document/d/1-vfco0ZyLrysjKm-RePY-OdvgvRgDwuV/edit
- Content and activities are modularised, to allow easy updating of various sections
- Course outline, materials posted on a learning platform. Participants invited/nominated, and enrolled on the course
- For the live sessions, 5 sessions of 2 hours each are structured over 2 weeks by the instructional designer working closely with the trade expert
- Dedicated online facilitator(s) helps with live sessions
- Teams are created at the start of the week and use of interactive exercises (similar to webinar series above)
- Follow-up coaching sessions with teams or individuals, with experts to deep dive into specific topics
- Each team needs to have at least 1-2 follow-up session, to submit a team assignment

**For low-bandwidth settings**

- Learning content modules can be made available on an offline player of the learning platform
- Use of a file sharing tool, with offline sync, e.g. Dropbox, Google Drive
- Use of low-bandwidth tools for team activities and coaching, e.g. WhatsApp

### 3.9.3 Simulation exercise

In addition to a blended programme, simulation or table-top exercises can be used to bring the training to life. The purpose would be:

- Be confronted with real life situations
- Encourage teamwork, collaboration, working under stress

**Design**

- Instruction designer works with a technical expert to design a methodology (duration, activities, format, etc). The design will include serious gaming mechanics, i.e. with team, roles, injects, media, etc.
- Session is run with a combination of Zoom, a messaging platform, e.g. WhatsApp group or ideally a gaming simulator
- A dedicated online facilitator helps with live sessions
- Teams are created at the prior to the session and detailed instructions are sent out
- Experts starts with a pre-briefing on Zoom, where the purpose, rules, etc are explained
- Participants are broken into virtual teams and rooms.
- Participants receive and respond to injects, messages via WhatsApp or gaming platform.
- Facilitator can track all activity in real-time and can stop simulation
- Debriefing session at the end to provide feedback

**For low-bandwidth settings**

- Use of low-bandwidth tools for simulation activities and feedback, e.g. WhatsApp
- Combine local in-person exercises with online activities, e.g. teams can be formed regionally