Reflection paper
Online learning and peace mediation at ETH Zurich

By Inbal Ben-Ezer and Owen Frazer

June 2020

Key messages

The Covid-19 pandemic has accelerated the development of online mediation training courses. Interest in the topic has been gathering pace in recent years, driven by new opportunities offered by technological development, cost considerations, and concerns about the ecological impact of aviation. This paper is written as part of a discussion taking place within the Swiss Federal Institute of Technology, Zurich (ETH Zurich). It aims to help the peace mediation teams at ETH Zurich to make an informed choice about whether to develop online learning resources for their further education and professional training programs.

The paper has four central messages:

1. The **purpose** of comparing in-person and online training courses is not to arrive at a definitive judgement about which one is better. Rather, the purpose is to make a decision on which mix of courses will best meet our specific objectives based on the resources at our disposal. Making such a decision requires a structured reflection on the pros and cons of each format. These are summarized in section 2 of this paper.

2. Developing quality **online training requires intentional design** rather than just "shoveling" existing resources onto the web. To assist such intentional design in section 3 we offer ten key points to consider when designing online training courses.

3. A decision on whether to develop online training courses must also be informed by what is already out there. In section 4 we therefore offer a brief **overview of what already exists** in terms of online mediation trainings.

4. Any decision to develop online training courses should be part of a **long-term strategic decision**, rather than a short-term improvisation. While Covid-19 may have provided the impetus, other factors will also shape the long-term assessment, such as institutional priorities, quality and cost considerations, and environmental concerns. In section 5 we conclude that ETH Zurich should maintain its in-person courses while seizing short-term opportunities to gain experience with online formats, opening the way to the possible development of a blended learning offer in the longer-term.

Contents

1. Introduction

Online learning is the use of internet-connected technologies as part of a structured learning process.[1] It may involve the use of tools such as e-mail, social media, video conferencing, and web-based collaboration platforms. Since the spread of the internet in the 1990s, internet-based tools have been increasingly integrated into the learning process. The spread of online learning builds on the much older tradition of distance-education, while harnessing the power of technology to reduce the distance in both time and space. Attention to online learning got a boost in the early 2010s with the hype around Massive Open Online Courses (MOOCs), heralded by some as having the potential to massively expand the reach of further and higher education. Most recently, the Covid-19 pandemic has forced many educators and learners online, and prompted widespread reflection amongst training providers about whether and how to adapt their training models.

2. Comparing conventional learning and online learning

In-person and online training each have their own advantages and disadvantages. One is not necessarily a direct replacement for the other; rather, they can be complementary. "Blended learning" seeks to combine the strengths of each by using a mix of online (or other distance learning formats) and in-person formats.

It is worth noting that the fast developments in communication technology mean significant changes in online learning possibilities. Notable technological developments have included the "jump" from a capacity for text and audio exchanges alone (e.g., via email, telephone, skype) to video-sharing technologies allowing sharing of pre-recorded videos (e.g., via YouTube), to the more recent capacity to hold live group video interactions (e.g., via Zoom). This has enabled transitioning from an online learning experience that is predominantly asynchronous (learner and teacher interact at different times), linear (learner is passive receiver of inputs), individual, and with fixed content, to an online learning experience that can be synchronous, interactive, social, with the potential for adaptive content, and thus come closest to the experience of an actual face-to-face class.

Given the fast technological changes, research is constantly lagging behind, and therefore should be taken with a grain of salt. For example, in 2011 Matz and Ebner reviewed online negotiation role-plays via text, audio and video technology. When addressing the challenges of video-technology (which in 2011 was pretty much not used), the authors noted that: "once reliable video is available, some of the concerns regarding online role-play will disappear"(Matz and Ebner, 2011, p. 304). This time has now come. (See Annex 4 for a more detailed consideration of online roleplays).

The particular advantages and disadvantages of any online training course relative to an in-person training course will depend on the exact design of the online training course. In the next section, we lay out possible formats and offer some design considerations. First, we list below some of the general advantages and disadvantages of online (distance) training, no matter its format.

Advantages of online learning

Organization and participation:

- Broad participation – transcends geography/physical boundaries/time zones and is relatively cheap and easy to access (e.g., costs may include covering local study spaces

---

[1] Also referred to as e-learning (Shapers, no date), internet-based learning (French, 1999), networked learning (Steeples, Jones and Goodyear, 2002). We will use the terms online learning, electronic learning and e-learning interchangeably.

or internet access for some participates, compared with flight and board costs for all participants).

- Accessible – anyone can join (so long as he/she has good internet connection).
- Safe – anyone can join without social/political risk (albeit new issues of net-security).
- Travel time efficient – no time wasted on travel.
- More sustainable – no air travel involved.[2]
- Teaching team investment/resources – Tends to involve high upfront investment (e.g., creation of online materials) with low-cost long-term impact (e.g., course materials are online for the taking).

Pedagogics:

- Tends to enable more easy review and repetition of course content (e.g., via shared text/video or recorded sessions).
- Tends to enable more self-paced learning: learners can learn at their own speed and according to their own schedule.
- Relevant for modern-day "real-life" interactions which *are* going online.
- Video-conferencing technology enables (short-spans of) high concentration, emotional presence and relational awareness (although levels of engagement can vary). This is due to zooming-in on facial expression, seeing multiple faces at once, and having higher self-awareness (by seeing yourself as you participate).
- Tends to work well for clear inputs, transmission of facts and concepts.

Weaknesses of online learning

Organization and participation:

- Time challenges
  - Everything generally takes a little longer online
  - Live video conferencing with a global student cohort faces the challenge of time-differences.
  - Video conferencing technology is conducive of only limited time-spans per session rather than intense 24/7 workshops (perhaps more of an issue for mid-careers who have to juggle jobs/childcare so value the "bubble" intense workshop structure).
- Accessibility challenges
  - Not accessible for those with limited internet access (and less conducive study environments).
  - Unequal access to conducive learning environments (e.g., if studying from home, having childcare responsibilities etc.).
- Safety challenge – limited online information security
- Demands student have high intrinsic motivation and pre-existing self-study capacities – e.g., MOOCs tend to have high-take up but low completion rates (Ebner, 2016)
- In the case of MOOCs and similar formats, they are challenged by catering to a very large and diverse potential audience, thus students have different participation intentions (e.g., some want to be highly participative, others more passive); variation in effort students are willing to put in, and challenging to asses because of number of students (Ebner, 2016).

---

[2] Although we should bear in mind that online activities also generate carbon emissions through electricity consumption. This may be much greater than we often think. See: https://www.nature.com/articles/d41586-018-06610-y. The environmental impacts of ICT and aviation are both likely to change over time with technological developments in both ICT and aviation.

- Possible need for more training staff (e.g., to teach, manage participant engagement, and manage the technology).
- Need for both trainer and student familiarity with technology.
- Feels like "less value for money".
- Training materials can be more easily imitated and used by others – which can be an advantage as well as a disadvantage.

Pedagogics:

- Limited possible activities, e.g., no option for physical movement or shared outdoors experiences.
- Limited feedback loops between teacher and learner and between learner and learner – even with live video-conferencing technology, instructors and learners often cannot see all participants at once.
- Limited networking and relationship building due to limited communication information (missing body language and behavioral dynamics) and limited informal interactions, e.g., over breaks, meals, etc.
- Limited capacity for social and collaborative peer learning
- Danger of over-structuring – loss of improvisation, authenticity, and adaptive capacity. Loss of relevance to "real life" practice.
- Tends to work less well for teaching soft skills
- Learning tends to be more easily "forgettable".

3. Designing online training courses

Developing quality online training requires intentional design rather than just "shoveling" existing resources onto online web pages (Oliver and McLoughlin, 1999, p. 422; Walsh, 2019, pp. 89–90). Online course development therefore requires resources. The extent of resources required will depend on the kind of product being developed.

Online learning exists on a continuum from shallow forms of learning based on transmission of information to passive receivers, to highly interactive offers that support deeper learning (Steeples, Jones and Goodyear, 2002, p. 326). Where a course positions on this continuum will depend on how the questions in the box below are answered (based on Shapers, no date; Steeples, Jones and Goodyear, 2002; Ebner, 2020).[3]

Ten key points to consider when designing online training courses

1. **Communication:** Would communication be *linear* (learner is passive receiver) or *interactive* (learner is active)?
2. **Time synchronicity**: Would learning be *synchronous* (teacher and student in simultaneous interaction) or *asynchronous* (teacher and student in interaction at different times)?
3. **Group dynamics:** Would learning be done *individually* or *collaboratively in a group*?
4. **Content flexibility**: Would the content be *fixed* in advance, or *adaptable* to individual or group needs?
5. **Content type:** Would learning be based on live or pre-recorded *video* materials, or partially/entirely *text-based* (e.g., readings and written lectures)?
6. **Location:** Would the course be *fully online* or *"blended learning"* (in-person and online)? What infrastructure is available (e.g., rooms, internet access and quality)?
7. **Participation:** would participation be *selective* based on pre-established criteria (and targeting a particular audience, e.g. peace practitioners, state representatives, or conflict parties) or *open* to all? How many participants would be involved?
8. **Feedback and assessment:** would participants receive feedback on their learning *continuously, at the end,* or *not at all*?
9. **Format:** is it *a one-off training* of a couple of hours or a *longer further education program* with a modular structure?
10. **Focus:** will the pedagogical focus be on advancing learners' *knowledge, skills, attitudes,* or *networking*? Is the goal to learn together as a social group (peer learning), or is it one-sided learning (teacher-student learning)?

Examples, strengths, weaknesses and resource implications of the different options are summarized in a table in Annex 5. The annex is a living document however, as we continue to reflect on the details of taking and running online courses, and collect good practices from various sources (discussions within the Mediation Support Network, feedback from team members, online webinars).

---

[3] "Whichever structure you choose, keep it largely uniform throughout the course, and make sure to announce – loudly and repeatedly – any deviations. Online students are more prone to confusion in the 'what do we need to do, and by when do we need to do it?' realm." (Ebner, 2020)

4. Mapping the landscape

There are several offers of online courses/MOOCs related to mediation (see annex 1 for a list, although this is not comprehensive, as things are continually being developed), as well as tools, learning structures, and platforms useful for online mediation training (see annex 2 for a list, and annex 3 for a list of ETH-specific resources). The Center for Security Studies at ETH Zurich offers two courses online via Moodle. Beyond ETH, the USIP Global Campus courses include free 3-hour micro-courses on peace mediation and related topics (such as political negotiation, conflict analysis, religion and peacebuilding), and longer courses (for a 300 USD fee).

There are other courses on topics related to, but not directly on, mediation. These include, for example fully online programs such as LSE negotiation course for executives, DCAF/ISSAT learning portal with courses on Security Sector Reform (SSR), and various online UN courses; and partially online programs such as Innsbruck Peace Studies MA Program as well as Oxford University MA international human rights program.

There are several interpersonal online mediation training programs, however these are primarily focused on training for online mediation practice (for example mediate.com). Most recently, given COVID-19, there are also more and more one-time events, conferences and lectures on mediation and related topics (e.g., organized by Harvard University's Program on Negotiation (PON), Center for Peace Mediation at the University of Viadrina and others).

As per the above, online mediation (or closely related) training tends to include asynchronous individually focused learning experiences with fixed content in a fully distance-learning format. As far as we know, until recently there had been a lack of offerings that were synchronous, or partially synchronous, and collaborative in nature. This has been changing since the outbreak of Covid-19, although many of these new offers are one-off events, tailored to specific groups, and thus not systematically mapped or widely accessible. Also, both a review of research and of current training offerings show a significant gap in 1) online skill-building training that include affective learning, and 2) systematic assessment of the quality of online learning.

It is our assumption that many traditionally offline programs are currently reflecting on the advantages and disadvantages of transitioning their offerings fully or partially online in the near future. The outcome of these reflections will likely depend on whether or not they see online learning as a long-term investment for environmental, pedagogical, or financial reasons, or a short-term intervention to make it through the Covid-19 pandemic.

5. Conclusion: ETH Zurich and online mediation training

ETH Zurich peace negotiation and mediation trainings combine a mix of interactive, experiential learning with more traditional formats of instruction.[4] Both are partially possible online, with the corresponding strengths and weaknesses of online formats. The online platform is relatively conducive of traditional instruction formats such as frontal lectures. These, with certain adaptations, could even benefit from the transition online, for example enabling student-paced learning. Role-plays and other interactive and experiential learning tools are more challenging. A review of

---

[4] ETH Zurich offers a Masters of Advanced Studies in Mediation in Peace Processes (MAS ETH MPP). The course is built on a close partnership between ETH Zurich and the Swiss Federal Department of Foreign Affairs (FDFA) and the foreign ministries of Germany, Finland and Sweden. The MAS is also supported by international organisations such as the United Nations (UN), European Union (EU) and Organization for Security and Co-operation in Europe (OSCE). The Mediation Support Team at the Center for Security Studies at ETH Zurich is also involved in delivering shorter professional trainings, including the Peace Mediation Course (organized by the Swiss FDFA in collaboration with the Mediation Support Project (swisspeace / Center for Security Studies, ETH Zurich) and the Religion and Mediation Course (together with the Swiss FDFA, the Network for Religious and Traditional Peacemakers and the Ministry of Foreign Affairs of Finland).

research has shown that most online mediation simulations still focus on theoretical/cognitive learning, with little in terms of skill building (Walsh, 2019, p. 86). Furthermore, mediation is adaptive in nature, and the more rigid nature of online platforms means they cannot offer the same learning experience. However, recent video-conferencing technological advancements have opened new possibilities in this regard (Matz and Ebner, 2011; Walsh, 2019; Ebner and Press, 2020) and the current situation with Covid-19 means experience is rapidly being gathered and shared.[5]

In addition to the challenges in terms of experiential learning formats, the limitations on communication flow in online formats (e.g. smell, kinetics and body language, variation in physical and informal spaces) restricts possibilities for collaborative, social and co-created learning experiences. ETH Zurich peace mediation courses cater towards mid-career professionals whose training expectations include both substantive goals such as knowledge, skills, and attitude development, and social goals such as networking and creation of professional community of practice. Online learning cannot replace the informal interactions of in-person trainings and offers restricted opportunities for social and collaborative learning.

The bottom line is that technology cannot at this point replace the comprehensiveness, depth and impact of the in-person learning experience (e.g. along emotional, cognitive, sensory, and physical dimensions). Human beings communicate differently in a face-to-face situation and so an online course will not be able to offer all the relevant experiential learning experiences that an in-person course can. However, some of the learning goals of our training courses can be achieved via online learning. We must also bear in mind that with more meetings and negotiations shifting online, there is a need for participants to develop skills in online, as well as face-to-face, negotiation and mediation. Therefore, online learning can provide meaningful opportunities for meeting some of our learning objectives, but is not a replacement for in-person training and some elements of our in-person courses cannot be achieved in the same way online.

Finally, it is important that we do not decide on a long-term strategy based on the short-term need to improvise due to Covid-19. The costs of setting up and running new courses need to be put into relation with the intended quality of the courses we seek to offer. ETH Zurich has a well-established set of high quality in-person peace mediation courses which it should continue to offer. However, we see benefits in seizing the short-term opportunities of courses postponed or cancelled due to Covid-19 to pilot some online training modules. In doing so we can gather experience in order to both develop and fine-tune these modules, and to feed into our ongoing reflections about how online formats can complement our existing in-person courses. There are certainly benefits to be gained in terms of creating a more continuous learning experience before and after in-person courses, as well as in mitigating some of the disadvantages of in-person courses we highlighted earlier. Given the potential for online learning to add value, we should consider moving in the long term towards more blended learning formats in the long term.

---

[5] Mediation Support Network members have begun sharing resources via https://docs.google.com/spreadsheets/d/1vQoOY4pAPvY6IDklPGQXiTlV8sUxAiDQJAnclS9LSa4/edit ?usp=sharing

Annex 1: List of online courses and programs related to mediation

(This list is not comprehensive)

- Center for Security Studies, ETH Zurich offers two online mini-courses, on the Harvard negotiation principles and on Interpersonal/organizational mediation
- USIP courses: USIP Global Campus https://www.usipglobalcampus.org/courses/ offers open-access 3-hour "micro" courses and longer 300$ worth courses. Courses particularly relevant to peace mediation include:
  - Mediating Violent Conflict https://www.usipglobalcampus.org/training/micro/mediation/
  - Negotiation: Shaping the conflict landscape https://www.usipglobalcampus.org/training/micro/negotiation/
  - Conflict analysis: https://www.usipglobalcampus.org/training/micro/conflict-analysis/
  - Introduction to religion and peacebuilding: https://www.usipglobalcampus.org/courses/
- Geneva Centre for Security Sector Governance & International Security Sector Advisory Team (DCAF/ISSAT) offer courses and study materials related to SSR: issat.dcaf.ch/Learn/E-Learning
- Peace Operations Training Institute (POTI) offers courses on UN peacekeeping operations and related topics: www.peaceopstraining.org/courses/
- UN courses:
  - UN System Staff College (UNSSC) offers a wide range of courses for UN personnel and visitors: newunkampus.unssc.org/
  - United Nations for Training and Research (UNITAR) offers conferences, open lectures, seminars, workshops: https://unitar.org/ as well as full online courses for individuals: https://www.unitar.org/free-and-open-courses.
  - United Nations Department of Safety & Security (UNDSS) offers BSAFE-safety course: training.dss.un.org/course/category/6
- Coursera offer various courses on civil crisis management themes to deepen and strengthen your own expertise: www.coursera.org/
- edX offers online courses from universities worldwide: www.edx.or. For example Harvard University course on Religion Conflict and Peace (https://www.edx.org/course/religion-conflict-and-peace) and University of Michigan course on Successful Negotiation (https://www.edx.org/course/successful-negotiation-essential-strategies-and-skills).
- London School of Economics offers an online course on Negotiation for execusitves: https://www.lse.ac.uk/study-at-lse/executive-education/short-courses/courses/secure/business-and-management/negotiation.
- Mediate.Com offers courses on interpersonal online mediation: https://www.mediate.com/products/pg1347.cfm

Annex 2: useful online teaching tools

- **Fablusi** - online role-play generator. https://www.fablusi.com/.
  - Here you will find collection of political simulations online via Fablusi in collaboration with other organizations: https://www.polsim.net/
- **Second Life** - online virtual world including role-plays https://secondlife.com/destinations/roleplay. A
- **Perusall** – online interactive group reading platform https://perusall.com/.

- **Peer instruction** - The idea of having lectures consist of a number of short presentations on key points, each followed by a "Concept Test" = short conceptual questions on the subject being discussed.
- **Flash animation** – Computer programmed negotiations tool, e.g., https://sfhgroup.com/simulations-next-generation-online-learning-negotiation/

Annex 3: ETH resources to support development of online learning modules

- ETH uses Moodle as its Learning Management System (LMS) for online interaction with students.
- IT support: https://ethz.ch/services/en/it-services/it-in-teaching.html
- Continuing education experience: https://sce.ethz.ch/en/ (including MOOCs through https://www.edx.org/)

Annex 4: Online simulations

General Challenges of online simulations

- Transferability to off-line mediation
- Limited skill-building given limited human interaction
- Administration - requires technical know-how
- Control - More challenge to stimulate and maintain student engagement from a distance
- For synchronous video teaching – Observation and debrief have the challenge of not necessarily being able to see /provide feedback to more than one group at once.

General Advantages of online simulations

- Ability to record, review, and study easily.
- Asynchronous teaching can overcome time-zone issues
- Asynchronous teaching can provide more time for reflection and incorporation of learning into action.
- Enhance role-play experience through new technologies (e.g., VR).

Possible mediums for online role-plays

- Text-based - e.g. email, threaded forum posts, instant messaging, documents posted online. These can be asynchronous or (more rarely) synchronous (e.g., live chat room). (see Ebner, 2017 for an example of negotiation via email)
- Audio – Good for more humanized communication. Hard for debrief (time consuming to listen).
- Video – "live" in class or students on their own.
- Use any medium – up to the students to find a way (e.g., phone, email, meet in person if they are in proximity) as long as they do it.

For a nice example see Douglas and Johnson (2007) online "Fish Bowl" role-play with use of "conversational framework" approach. Included (1) online discussion board; (2) role-play (where one group of students play it out and others watch); (3) reflective journal. (Matz and Ebner, 2011)

Annex 5: Online course design options

This table considers the strengths, weaknesses and resource implications of different design options. It is a living document to be added to as further experience is gathered.

Questions	Option	Example	Strengths	Weaknesses	Resource implications
Communication	Linear	Pre-developed Text, audio, video	• 1 "learning tool" for many uses	• Learner is passive	• Can pre-record/ develop & re-use
	Interactive	Discussion board Email correspondence Video conference	• Learner is active	• Need for constant «live» feedback	• Need teachers / facilitators each time
Time Synchronicity	Synchronous (teacher-student simultaneous interaction)	Zoom meeting "live" chat	• High accountability. • More immediate correction • Best for those who can schedule set days/times • Best for those who like structured courses, guidance, and interaction with others.	• Time difference challenge • People may get left behind because of understanding or technical difficulties.	•
	Asynchronous (teacher-student interaction is	MOOC Book Discussion board Email	• More time for preparations • Students advance at their own pace & can repeat.	• Low accountability can't see if person "gets it" and react/correct immediately	•

at different times)	Reflection paper	• Best for busy people/complicated schedules / groups on different time zones • Best for self-motivated learners who work well on their own without direct guidance.			
Group dynamics	Individual	Reflection paper	• More control	• No relationship-building	•
	Collaborative	Group project/ Discussion Role play	• More teaching resources (students) • Good for advanced edu where students are experts	• Learners can get frustrated if other learners not so motivated • Time difference challenge	• May require more facilitators and technical support
Content flexibility	Fixed content	Planned/recorded lecture	• Good where no room for individualized attention • Can re-use	• Not tailored to group	• High effort up-front, low effort long-term
	Adaptive content	Video meeting Individual/group feedback on role-plays or reflections	• Good if there is room for individualized attention	• Risk of under-preparing or encountering technical difficulties	• Regular moderate effort with fluctuation
Content type	Video	Lecture (live or prerecorded) Video-meeting	• More immediately engaging • Can combine visual and aural	• Less accessible for learners with poor internet	• Uses more bandwidth • High upfront investment to create quality videos (if pre-recording)

	Text-based	Article Lecture notes Discussion board Reflection papers	• Can communicate more complex ideas	• Only one medium • "Depersonalized" learning.	• Low tech • Low(er) cost
Location	Distance Learning	USIP Global Academy	• Easily accessible	• Relationship-building harder • Less accountability / completion rates	• Cost effective but needs good tech capabilities & high upfront investment (depending on medium)
	Blended (Mix)	University of Birmingham Research Methods Innsbruck Peace Studies	• Best of both worlds	• Connecting the two can be challenging	• Possibly most cost intensive because work in two mediums
Participation	Selective	Online ETH BA and MA courses	• Relationship-building • Tailored feedback	• High cost per person	• Fewer as numbers lower
	Open	MOOC	• Reach many people	• Harder to build relationships • Variation in commitment and knowledge of learners	• Interactive versions are resource intensive
Feedback	Continuous	Peer-to-peer debriefings	• May keep learners motivated	• Eats into content time	• Can add to resources required
	One-off	Final test	• Sense of closure	• People may not make it to the end	• Low

None		• Less work for trainers	• Demotivating for learners	• Low

References

Ebner, N. (2016) *Negotiation and Conflict Resolution Education in the Age of the MOOC*. SSRN Scholarly Paper ID 2833680. Rochester, NY: Social Science Research Network. doi: 10.2139/ssrn.2833680.

Ebner, N. (2017) *Negotiation via Email*. SSRN Scholarly Paper ID 2348111. Rochester, NY: Social Science Research Network. Available at: https://papers.ssrn.com/abstract=2348111 (Accessed: 12 May 2020).

Ebner, N. (2020) *'Next Week, You Will Teach Your Courses Online': A Reassuring Introduction to Pandemic Pedagogy*. SSRN Scholarly Paper ID 3552124. Rochester, NY: Social Science Research Network. Available at: https://papers.ssrn.com/abstract=3552124 (Accessed: 12 May 2020).

Ebner, N. and Press, S. (2020) *Pandemic Pedagogy II: Conducting Simulations and Role Plays in Online, Video-Based, Synchronous Courses*. SSRN Scholarly Paper ID 3557303. Rochester, NY: Social Science Research Network. doi: 10.2139/ssrn.3557303.

French, D. (1999) *Internet Based Learning: An Introduction and Framework for Higher Education and Business*. Stylus Publishing, LLC.

Matz, D. and Ebner, N. (2011) 'Using Role-Play in Online Negotiation Teaching', in Honeyman, C., Coben, J., and De Palo, G. (eds) *Rethinking Negotiation Teaching: Venturing Beyond the Classroom*. DRI Press, pp. 293–317. Available at: https://papers.ssrn.com/abstract=1916792 (Accessed: 1 May 2020).

Oliver, R. and McLoughlin, C. (1999) 'Curriculum and Learning-Resources Issues Arising From the Use of Web-Based Course Support Systems', *International Journal of Educational Telecommunications*. Association for the Advancement of Computing in Education (AACE), 5(4), pp. 419–435.

Shapers (no date) 'E-learning models explained'. Shapers.nl. Available at: https://www.shapers.nl/e-learning-explained.pdf (Accessed: 14 May 2020).

Steeples, C., Jones, C. and Goodyear, P. (2002) 'Beyond E-Learning: A Future For Networked Learning', in Steeples, C. and Jones, C. (eds) *Networked Learning: Perspectives and Issues*. London: Springer (Computer Supported Cooperative Work), pp. 323–341. doi: 10.1007/978-1-4471-0181-9_19.

Walsh, S. (2019) 'Setting out across the sea of monsters: Bringing learning design into mediator training', *Conflict Resolution Quarterly*, 37(1), pp. 79–94. doi: 10.1002/crq.21255.