

The background is a solid teal color. Overlaid on this background are numerous white line-art icons. These icons include various tools such as screwdrivers, wrenches, and paintbrushes, as well as design-related elements like a lightbulb, a camera, a smartphone with an Apple logo, and geometric shapes like cubes and rectangles. The icons are scattered across the entire surface, creating a pattern that suggests a focus on design and fabrication.

Design and Development

SLQ Wiki Fabrication Lab 2025/07/04 01:38

Design and Development

Development considerations

There are many differences when delivering a workshop remotely and many considerations during the development. Delivering in person, with the technology and resources in a library is easily taken for granted.

- What software/apps do you need for the workshop? Participants cannot be expected to purchase or subscribe to expensive software
- What are the hardware requirements for the workshop? The average person will not have the latest and fastest hardware
- Can the workshop (software) be run on all major operating systems? macOS and Windows, Linux? Are there any restrictions for what version the participants can be running?
- Using online tools removes the need for downloading and installation. This saves time during the delivery or removes the need for participants to download/install things by themselves prior to the workshop
- Hazardous materials and tools creates challenges with OHS, risk assessments need to be written for overarching online program as well as for individual workshops. Minimize the risk and provide as many tools as possible.
- If you are sending out kits to the participants make sure to:
 - A) Collect postal address and make it mandatory
 - B) Consider delivery durations to make sure they are delivered in time
 - C) Make pickup an option for the participants (if possible)

Designing Online Workshops

In person workshops are a familiar and effective mode of engagement, with a set of implicit norms that may only become obvious with your first online delivery. The social aspects of this way of working are sometimes the main motivator for participant engagement – meeting new people, sharing time with like-minded individuals and the serendipity of social interaction are all valuable outcomes which are hard to replicate in a virtual environment. At the same time, technology uptake has changed the way people expect to interact, and it may be that your participants are more digitally native (and comfortable with the constraints) than the facilitator. Even so, working in the virtual seems to make the experience much more front facing m- the talking head on the screen is the sole input, and glancing about the space, chatting to the person next to you or playing with your phone becomes impossible. The facilitator is always on, and in a very focussed way for each individual – you and each of them feel like the only people in the room, and so each expects a more focussed and personal experience.

As a facilitator, ‘reading the room’ becomes fraught – non-verbal inputs are heavily filtered, if present at all. The ability to spot a problem and move to one-on-one assistance is almost lost, when the rest of the participants cannot help each other to continue an activity (though having a production assistant can help address this – see below). The facilitator’s view of each person’s progress is

severely limited by the participant's camera field, and this rarely includes whatever they are working on. Facial cues become more important, and participants need to be encouraged to be more explicit about requesting help. And that never works for shy people.

For the facilitator, checking on progress becomes more essential, and balancing these one-to-one interactions with group needs becomes a tension. At the same time, calling on individuals can help them feel more part of the experience, and a specific intention to do this will disrupt the 'invisible wallflower' mode that some members of every group employ as a default. This can be good (engaging), or bad (embarrassing), but likely you will not know until after the event. Some of the best online engagement outcomes have resulted from having more than one person on the other side of the screen, both for facilitators (see below about production assistants) and participants (seen with parent and child co-working, for example). Like most dichotomies, it might be that the best choice of two apparently opposite approaches - everyone present in a room together, opposed to everyone in their own room - is to combine both and have participants physically with one other, as well as virtually with the group.

Daniel's 10 cents worth... Remember that all of this is for the benefit of the audience/participants. Every decision you make around how and why you do something should loop back to them. Ask yourself repeatedly; if I were listening to this would I continue listening to this and if the answer is no then change it up. Record your session and watch it back. Be critical on how you present and what you could do better. Run it through with a colleague you trust and respect then ask them what could have been done better. You don't need to agree with them or do as they suggest but at least you've heard an objective opinion because as sure as water's wet and the sky is blue your subjective belief of what you sound like is not going to cut it. You will hate the sound of your own voice, assume you're speaking at a pace that is suitable for streaming and that your hands are not fidgeting but they likely will be. You do it so often that you will have stopped noticing and that is a recipe for not being the best outcome for the customer, because they are customers. They're not always right and they're trusting you know what you're doing even if you don't and the secret is this; fake it until you make it and the odds are no one will know the difference.

Preparation: Materials

Materials will either need to be readily available and assembled by participants in response to a pre-event email. Pausing mid-event to supply additional parts, or to use unique technologies to recover mistakes is not possible, so redundancy needs to be built-in to the experience for critical parts that have been identified as fragile or capable of misapplication.

Using common materials

POSITIVES

- Increases the possibility of future exploration by participants, who experience how everyday materials can be used for prototyping their ideas
- Lowers the fear factor, which can be a barrier to exploration if materials are seen to be expensive, 'special', rare or difficult to obtain
- Makes mistakes and failures less traumatic

NEGATIVES

- Reduces cost to the facilitator (and possibly the participant), but limits the range of possible activities
- Runs the risk of participants not having materials on hand, either due to misunderstanding, cost or unavailability
- Reduces the wow-factor that might attract participants in the first place
- Leads to a diversity of inputs that makes delivery more complex

Using supplied materials

POSITIVES

- Increases the perceived value of the experience by making it special. The excitement of getting a package in the mail is a good motivator, and may enhance the perceived value of the engagement.
- Allows unusual, specialised or bespoke items to be part of the workshop
- Provides for more unique participant experiences
- Allows participants to access required files or weblinks before the workshop
- Increases participant engagement, both as a reminder, and as a demonstrated commitment by the facilitator to the event.

NEGATIVES

- Increases delivery costs through postage
- Requires more pre-delivery input (purchasing, packing and postage)
- Runs the risk of delivery services causing critical delay

Preparation: Documentation

Detailed documentation is a way to preserve the work done developing the activity and making it available for iteration and replication. Documentation usually requires that the activity be run through several times by the facilitator, and this process allows for reflection on the best sequence of steps, as well as revealing where the more difficult parts are. The facilitator can try different techniques, investigate alternative solutions and get a better idea of the time required (a good rule of thumb is to add 20% more time for an inexperienced participant).

Having complete documentation before the workshop

POSITIVES

- Allows for a secondary communication channel to be available concurrently with the workshop. Having the documentation available to put on screen during the workshop can give access to better images and diagrams than what is usually possible in a live-streamed event.
- Allows participants to work asynchronously (greatly assisted by having an assistant)
- Increases participant confidence that they can complete the activity, even if the workshop is timed out before ending
- Allows facilitators to generate detailed lists of materials and tools
- Highlights OHS concerns before delivery

NEGATIVES

- Documentation takes time, and this will need to be scheduled into the facilitator's workload
- Some insights only become apparent in the moments of delivery, and these will not be captured if documentation is completed beforehand. Revision should be allowed for (and further increases the time required).

Preparation: Tools

Tools will be restricted to those commonly available (scissors, writing instruments, etc) unless specific tools are included in a mailed-out package (which increases costs). Instruction in the use of unfamiliar tools also takes up more workshop time, unless prior learning packages are set up, and used. All tools used also bear greater OHS consideration, given the lack of direct supervision (and the possibility of first aid response). If unique tools (like a laser cutter) cannot be avoided, then the activity will need to be supported by a mail-out, with all the negatives listed above. This is not an absolute disqualifier, but it means the extra time and cost will need to be considered in the approval process.