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The modern library:
technology-enhanced library spaces

Learning from making and doing: taking the makerspaces to the next level at Maynooth University

At a glance...

- Building on experience to create a bigger and better Makerspace and expanding into Media Lab provision

- Using digital creativity to promote the university to undergraduates and postgraduates

- Selecting and planning space that is fit for purpose

1.   Executive summary

What do you do when you already have one makerspace that is well-used and popular? Answer – create an even better one! And then start thinking about what other types of content need to be created and embark on a Media Lab to complement this. This is exactly the journey that Maynooth University is currently embarking on.

From its launch in 2015, the Makerspace developed a well-used 3D printing service which continued up until the pandemic when it had to be put on hold as a library-based service. The recommencement of the service in 2022 coincided with staff moving on and recruitment of new staff giving the impetus to take the services to another level. This has led to a successful bid to create a new, more ambitious makerspace, and as well as opening up new opportunities, the most significant of these to date being the collaboration with the Media Studies department and other interested parties to launch a Media Lab.

Building on their experience the team have been able to make the case for good locations for both the new Makerspace and Media Lab, putting their 'lessons learned' to good use.

Extensive and imaginative use of social media channels has helped to embed the Makerspace within the university conscience and opened up avenues for collaboration. Through the Makerspace, the library has been able to offer creative and practical support to an expanding portfolio of research projects across the university as well as being an active supporter in undergraduate recruitment.

2.   Learning from Makerspace no. 1

When the library IT development team at Maynooth University were presented with a library refurbishment plan that included little more than a lick of paint over their existing Makerspace, ideas began to flow about what would make this service so much better.

Initially begun in 2015, the Makerspace was a modest setup located in a small, repurposed room within the library. It primarily offered a limited 3D printing service and provided a meeting space with restricted workshop facilities for specific university departments controlled by swipe-access. The room was situated in the middle of the library building meaning it wasn't easy to find and lacked overall visibility. It was also relatively small meaning that only one activity could really take place at any one time. Like many small rooms in the centre of a building, heating and ventilation left a lot to be desired, especially once anything up to four 3D printers had fired up, increasing the temperature still further. As a workspace, staff found it less than satisfactory.

Since 2022, the Makerspace has undergone significant development. The Makerspace was no longer just the realm of 3D printing but a hub where virtual tours and experiences were being developed, and gaming demonstrations undertaken using a variety of technologies. Noise had become an issue. Contrary

to most library projects, this one wanted to make noise and not stop it. VR gaming was too loud and distracting for everyone working outside in the main library. Noisier activities such as soldering and drilling were also off the agenda.
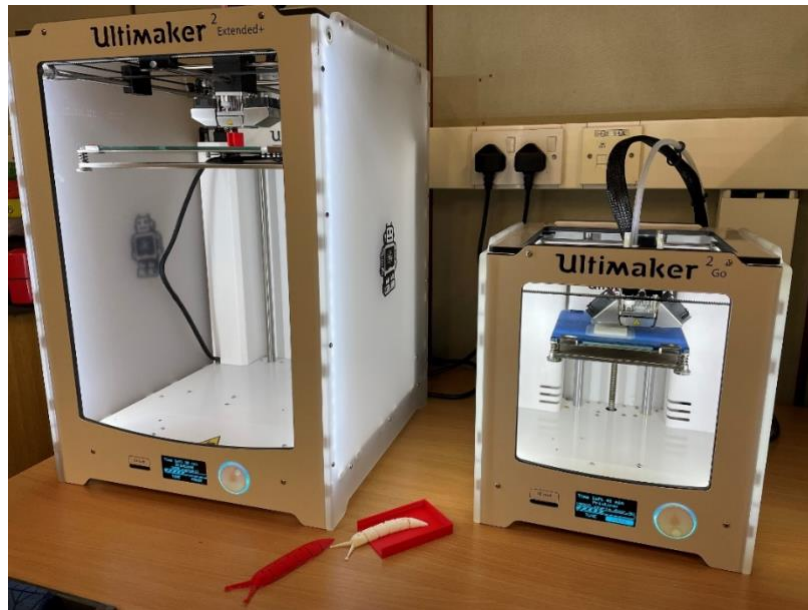
3D printers

The university was already recognising the value of the Makerspace, engaging the team in running demonstrations during open days. However, with the location of the room in the centre of the building, a physical tour wasn't feasible and so the team became practiced at shifting kit downstairs and out of the building to give virtual tours and fun demonstrations such as their claymation figures.

Claymation figures

The popularity of the virtual tours means that they have now extended beyond the library to other areas of the university and are sent out to applicants, helping to make university seem more approachable and accessible, and demonstrating how the library can contribute to the university's recruitment strategy.

These new activities were attracting significantly more users and were a live demonstration of the potential of the Makerspace as a hub for innovation and creativity, opening up the services across the whole university and potentially beyond.

3D printing for Love Data Week

3. Makerspace no. 2 – becoming fit for purpose

When the library IT development team attended the staff consultation on the library refurbishment they saw an opportunity. The case was made to the library senior management team to consider a ground floor accessible location for a future makerspace rather than retaining it in its current location. The rationale of improved accessibility and visibility, better soundproofing, more scope for multiple activities and ease of management of the space was accepted and the revised location included in the refurbishment plans.

To the delight of the team, the new Makerspace is located on the ground floor of the library, immediately increasing its visibility and provoking curiosity and interest from passersby, as well as enabling a public facing access. When it opens (Spring 2025), it will still be past the library turnstiles and be accessible via swipe card access but its location means that staff can easily welcome in visitors when required. The room is lighter, brighter and has improved layout. More importantly, it has been furnished with improved soundproofing, enabling the team to consider the possibility of doing disruptive activities such as drilling. The room is also big enough to facilitate parallel activities and the team are hoping to purchase some room dividers to provide an element of privacy when multiple activities are taking place. However, creating a Makerspace is a journey and not always a smooth one. There are still some activities the team aspire to do, such as soldering, which are currently restricted in terms of health and safety.

The new Makerspace will be equipped with state-of-the-art 3D scanning equipment, new VR equipment and gaming capabilities, allowing for more sophisticated projects and a wider range of

services. Plans include 3D scanning some of the university's special collections in order to create handling objects for classes.

When choosing equipment for the new Makerspace, the team have reached out to staff at other makerspaces for advice on what's working well. For example, what makes a good scanner to hand out to students to take out and experiment with as against a high-quality scanner for research purposes? Networking with other makerspaces has been a very useful exercise.

4. Media Lab – providing new opportunities

Neither the old or new makerspaces would lend themselves to creating audio-visual content and the team could see opportunities in a new collaboration with the Department of Media Studies that would enable the creation of a Media Lab to support this activity. This was not in the original library refurbishment plans and therefore the library and media studies staff needed to join forces to put in a joint bid to gain funding for this. This meant the library contributing to an application by the Department of Media Studies and a number of other departments to the Higher Education Research Equipment Grant (HEREG), an initiative of the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS). The successful bid allowed specialised media lab equipment to be purchased to kit out the space that had been made available in the library. The very process of engaging in cross-departmental/ unit discussions about audiovisual and creative needs helped all

parties to identify shared interests, areas of expertise and opportunities for collaboration.

3D printing demonstration for Research Week 2024

The timing for this was neatly aligned with the launch of new strategies for both the university and library. The work of the both the Makerspace and Media Lab fit well with the People and Culture heading with their aim to support research and innovation and, in doing so, to raise the profile of Maynooth as a place to apply for postgraduate study. Creating media rich content, particularly short videos and podcast series, are a key element in the dissemination of research. In particular, this has become a growing institutional requirement at Maynooth since there has

been a recent expansion into PhDs by practice, especially since the signing of a Memorandum of Understanding with IADT (Institute of Art, Design and Technology) and the commencement of PhD co-supervisions, largely in the areas of creative practice.

The new Media Lab, which is currently planned to open in summer 2025, will endeavour to support a variety of digital media projects, providing tools and resources for video production, audio recording, and multimedia editing that will be available during library opening hours. It is also opening up new opportunities such as undertaking engaged research and to cultivate community engagements, most recently by supporting Gaelscoil Ruairí in their undertaking of Irish language oral history interviews with Kildare-based Irish language speakers.

The Media Lab includes on-site space and filming kit for interviews and online content creation (e.g. workshops, teaching videos, etc.); exterior/on location kit for shooting beyond the university; two podcasting studios; editing suite; and an equipment storage space and collection point (staffed by media studies, two hours per week going forward). This collaboration has ensured the creation of a multi-purpose and multi-disciplinary resource that fosters collaboration and encourages creative practice.

Ironically, the new Media Lab will take advantage of being in a windowless room, with dedicated lighting control. Equipment will include four camera kits, one broadcast standard camera, two high quality camcorders and one Digital Single Lens reflex (DSLR) camera. There are two podcasting studios equipped with Rode bidirectional mics and mixing desks, and soundproofed booths. The intention is that, following a short induction, this facility will effectively become self-service.

The Media Lab complements the Makerspace as a library creative space and the media studies staff are happy to take advantage of the library setting, recognising that it is very accessible to students with its generous opening hours. They also know that students see the library as a safe, approachable space where they won't be judged for not knowing something.

5. Staffing considerations

When the first Makerspace was opened in 2015, there were no dedicated staff at all and the relevant library team simply had to pitch in to assist in providing a service. The creation of new roles in 2022 to develop library technologies, including the makerspaces, clearly enabled the services to move up a level. The three staff within the library IT development team all participate in running the service alongside other activities, with the lead being taken by the Digital Engagement Curator. That said, staff are not permanently based in the room.

During a typical month the team are handling between three and ten 3D printing requests from students and staff, alongside creating promotional materials such as their 3D printed jellyfish and coronavirus model.
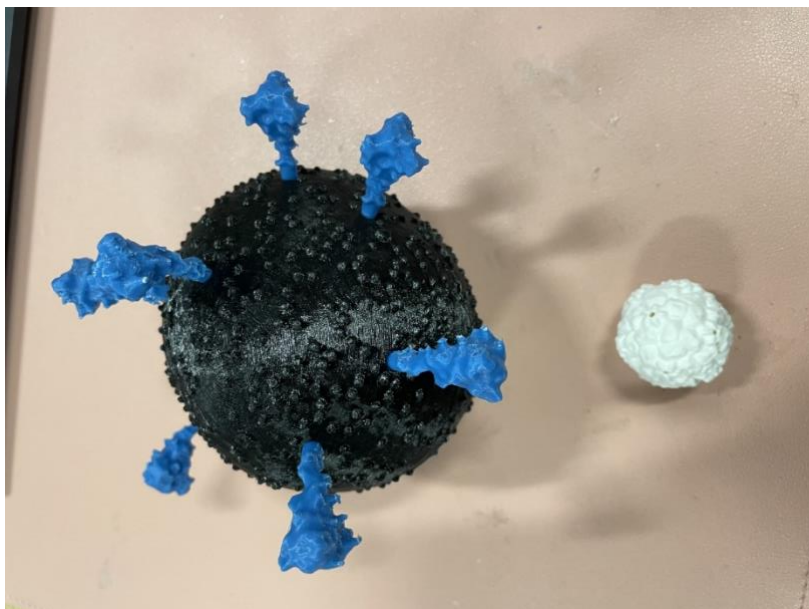
Covid-19 and the common cold

The Media Lab will be staffed by the audiovisual tutor from media studies for two hours a week, and they will also manage a booking system for the kit. The AV servicing is managed by the Head of the Department of Media Studies. The AV tutor can provide training and inductions on the AV kit and, if there's interest, offer 'train the trainer' sessions for anyone in the library who'd like to do training sessions in house. This will help to fast-track building expertise across the library team. The library has plenty of reasons for developing its own video content so they think there will be plenty of enthusiasm for this. Within the Media Lab, there will also be a requirement to run health and safety inductions for users and workshops.

The team feel that they are currently managing the workflow but might have to rethink how services operate if this suddenly changed.

6. Sharing the good, the bad and the ugly

Christmas gifts

Social media plays an important part in promoting the service. The team take a very open and honest approach, celebrating their successes on Instagram with their #makermonday and their failures with their #failfriday posts, all of which can be seen @MULibraryMaker on X, Instagram, BlueSky and TikTok. This activity reflects the overall ethos of experimentation within the Makerspaces.

7.   The future

Once the Media Lab is launched, the team are anticipating seeing changes starting to be made in using audio and video in assessment. In the new Makerspace, they intend to offer 3D scanning and really want to use this to open up opportunities beyond STEM subjects. The university is also planning a new School of Health and Medicine and the team are anticipating a significant rise in demand for facilities such as VR when this happens.

> *"Our aim is to see a rise in collaborative projects, workshops, and events, fostering a vibrant community of innovators and creators between students, faculty and the wider communities".*
> Heidi Campbell, Digital Engagement Curator, Maynooth University

8.   References

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