# Record of Observation or Review of Teaching Practice

Session/artefact to be observed/reviewed: 1 to 1 sessions with students

Size of student group: Variable

Observer: Tim Stephens

Observee: James Hopkins

##### *Note: This record is solely for exchanging developmental feedback between colleagues. Its reflective aspect informs PgCert and Fellowship assessment, but it is not an official evaluation of teaching and is not intended for other internal or legal applications such as probation or disciplinary action.*

Part OneObservee to complete in brief and send to observer prior to the observation or review:

What is the context of this session/artefact within the curriculum?

I run a digital fabrication space at CCW Foundation. Students are currently working on their FMP (final major project) so I will help aid the process of preparing files for digital making and digital fabrication.

How long have you been working with this group and in what capacity?

The students are split into art, communication and design. The current group of students I have been working with since September 2023, however some I may see for the first time depending on their familiarity with the digital workshop.

What are the intended or expected learning outcomes?

To understand how digital software can be used to produce physical work, via fabrication tools like 3D printed, laser cutter, pen plotting etc.

What are the anticipated outputs (anything students will make/do)?

It’s dependent on students’ personal projects but will be in the realm of digital file creation and fabrication. For example, helping a student prepare an Adobe Illustrator file for laser cutting.

Are there potential difficulties or specific areas of concern?

Students unfamiliarity with the workshop, maybe coming In for the first time and/or their potentially limited understanding of digital processes might need more assistance and have trouble with specific terminology.

How will students be informed of the observation/review?

Students will be notified via moodle and email.

What would you particularly like feedback on?

Clarity of discussion with students, knowledge dissemination, accessibility of space?

How will feedback be exchanged?

Verbally through Teams if not possible on the day (via tutorials) or informal chat after session has ended.

## Part Two

### Observer to note down observations, suggestions and questions:

St. Students

T Tutors that walk into the session

Other comments are from you.

I do Teaching Obs., by noting the sequence of events…this will help you recall the session and reflect on what you think is happening and what you did at the time, based on your memory of the session’s events.

12.05

Helped student print a mask-type object

St.0 Thank you! [A student is seen picking up something and looking really pleased, leaving the workshop with it]

St. 1 I’ve loaded your drawing, you want to pick some materials, we have a bunch of different ones, probably nice to try different ones…want to try these.. plexiglass ?

You can take a look….it will cut this black line…

Invite student to the machine, to get them involved..

Might take a little while…[looking over the cabinet with the St]

St 2. comes in to ask question; log in to one of the computer’s trace it in black and white, just export this one as an spl file…air drop this file…[you go and help student on the computer]

‘is that right that slope right…’ oh you know what?

It’s upside down right, select an object…

You move back to the lasercutting machine…you’ll see how it changes…these are the two most common…

New St 3. walks in…enquiry…’Do you want to draw it out and I can do a test…’she goes off to computer suite.

Back to the student 1 doing a test; [you have a way of narrating the actions and what is typical, pointing out details] You can see on this how…

You check the file/image on the main computer station you are using..

Walk over to the St 2, ; You explain, it’s too thin, for the printer; as to what the machine is able to pick up…

You explain as to what the problem might be…if that doesn’t work….maybe try this first…then if that doesn’t work..

Return to St.1; How’s it looking

St. 1 Looking good

Nice

When you scan something that’s hand drawn…[Explain]

Dialogue with students on the dystopian project..

What’s your final project idea?

St explains…

This is not going to cut the hole, but this bit in particular is going to look really nice…

[You are at the computer looking at the drawing-object being rendered/printed – and checking some details in the machine itself]

[You come over to St 1] this is like a glass effect, scratching in the glass…think it will look really nice..

You go over to St 4 [She has been working quietly already on something you may have checked earlier] …So, how big do you want it, what sort of size you…

St.4 A ply ?

Why don’t we just find the material…

This is ply, I’ve just going to use this one for reference …

You go over to St. 3, and work on the machine directly. I might have to think about this…we might have to build it another way…[You problem solve the design, with the student]

[You go back to St 4], Yeah so what size…

St. 4 gives measurements….30 across and 20 down…

It will take quite a while…

I don’t mind doing it smaller…

If you did it on ply…is that better than…Why don’t we do it in this for now and then do it again afterwards…

St 4 explains that this is fine…

St 5 is waiting. [I think she had worked on something previously in the suite]

St 4 gives smaller sizes…

Yeah, that’s great, I think that’s going to be really nice…might be done before lunch…come back at 2, burns that whole image on and that’s what takes the time…

You check the existing jobs.

St. 5…Let’s try and cut a circle first…triangles…what are they being used for..?

[You discuss with this student the parameters of her job request]

You go over to St.2 Explaining the image features and qualities and how that relates to the production, you sit on the computer station and she stands next to you whilst you explain. This is you doing some more substantial teaching; explaining a. number of things at once; parameters of the image, the process of designing (software) the constraints of the making, and each seem to be combined into one interaction.

St. 5 returns to look at their job with you next to the lasercutting machine.

St. 5 explains the object ‘wider at the top’ [You discuss referring to the machine, the computer-image and the student]

‘Hi

St. 6 Hi (returns, from earlier)

I haven’t had time to do…

[You negotiate what she requested earlier…] It would have to be after lunch….what colour, orange? Gold?

St 6. Orange

It would have to be…you explain… it would be ready after lunch.

St 5, thanks, she returns to her seat. [She later leaves the room smiling and happy]

St 2. Sorry it’s so busy today…

You do some work on her piece. There’s more than one way to do this…I’m just selecting the lines..that’s all transparent now…selecting these …

Tutor 2 (comes in with another St. 7): In a minute speak to James, [Explains and agrees the job] It’s coming up to lunchtime, maybe book with James for after lunch.

St 7 Ok cool.

Tutor 2 good. [Leaves the room again.]

You are continuing in the teaching scenario with St. 2., and manage to complete the explanations leaving her working on the computer

St 2 Thank you!

[You talk to another student sitting next to her, not sure if I saw her earlier…St 8.]

Yeah, I’ve got the file [to St 8] It’s giving it, almost an effect, like stairs (/) all the way down..

St.8 Yeah that’s something I wanted…yeah

It might be because this is the setting we all use for prints…

This is the size of the nozzle, most, you sand it, paint it, yeah, it will get rid of that straight away…And size…cm’s

[Discuss with student the parameters of the job]

Do you mean…?

St. 8 My bad…

Conferring on the measurements which you seem to triple check.

I’ll print them one at a time, easier on the printer…like 3, half an hour at a time…so set that up…come back at 3 ?.

St 9. Asks about previous work.

Yeah I’ve put it here, with the tape so the pieces don’t fall out…

Oh so good, this is exactly the kind of things I like using the lasercteer for…T3 Hey look at these, really nice T2 return and joins in…be interesting to paint that first and join them together afterwards

T 3 walks off, Nice to see something new

T2 walks off

They really fit with the image of the painting

St 9. Explains the job…I wasn’t going to display these two…need to find a way to what to stick them on, some sort of cement or plaster…

St 2 [leaves] After lunch I will cut that….

For feedback related to your points of interest I have a few comments:

“Clarity of discussion with students, knowledge dissemination, accessibility of space?”

Firstly, I’d like to say that you told me that your 2nd technician was off ill. This meant that you were hosting the technical workshop on your own. Perhaps this was an untypical session because you had to manage so many student inquiries and juggle their requests at the same time. I do want to say that you did handle this task remarkably well. Each of the students that came in to the workshop within the hour that I observed, which came to about 9 students, were each seen to, listened to, responded to, and helped in very practical ways. Some of the tasks that you were completing were from earlier in the morning, the previous day, or scheduled for later in the day after lunch, hence you were also juggling different timelines for each of the student requests. For example, one student came in from yesterday who was looking for an already cut out piece of wood, and you showed her where on the table it was and managed to have a quick conversation with her about the outcome. With this particular student there was a wonderful teaching moment where you were able to disclose that you felt this task was the perfect use of the laser cutting machine from your perspective. You explained why and also, by coincidence, two tutors happened to walk past at this point and got involved in the conversation (you called one over to look) and they got involved in appreciating the complexity of the outcome of the student’s work that you had facilitated. One tutor even commented on how wonderful it was to see such work.

*Clarity of discussion with students*

You do a type of teaching that is common amongst technicians and in workshop scenarios which is called modelling. Teaching as modeling is where we demonstrate through our actions in real time what it is that the student can learn by copying. This is also therefore commonly called demonstration and perhaps is more popularly thought of as ‘learning demonstrations’. This is not necessarily restricted to technicians and workshops and can include the teaching scenario of the master class for instance. When you are in this mode of teaching I noticed you were very effective in communicating with students. There are a number of reasons why this is the case. Firstly, you speak in a way that narrates what it is you are doing, as you do it. This is a very direct way of teaching and is usually effective because students can see what it is that is happening or supposed to happen at the same time as you explain it. Even, in explaining why something is being done the way you are doing it. This enabled you to explain to those students with little knowledge introductory material about the software, the machine and its process, their design process, the limitations of some of their ideas/designs and the need to adapt them, and a whole range of other informative points.

*Knowledge dissemination*

See above. Knowledge dissemination can be thought of in very different ways. First you might want to think about what types of knowledges you are interested in. Let's take for example those who are new to laser cutting. They might wish to know vocabulary. Basic names and terms of things, basic functions, basic processes, and simple actions. In this scenario it's not usually viable in the long run to explain everything multiple times for different students and at some point technicians want to find ways to simplify their job and produce resources that can supplement their explanations. Resources I often say are your teaching assistants, they can be working whilst you are elsewhere. Then what we can do during a demonstration is for instance give out the relevant handouts that explains the part of the process that we are doing either visually or in steps or instructions. Or give a handout that labels a piece of equipment and shows the key terms involved and so on. More complex knowledge that is process involved, or that synthesizes different aspects of experience or that draws on your specialist expertise is usually best presented in self-contained topics or themes because sometimes even this knowledge is often repeated to numerous students in numerous situations. Why would we not want a short video that explains something in order to take the burden off delivering everything in person to each inquiry separately? Even if we don’t use it in this way, we may want to signpost the student to this as a reminder, reinforcement of learning, or as a resource to encourage independence in learning.

*Accessibility of space*

Space itself was well used by you and the students. There was a small teaching space in front of the machines to the right of the door, there was also a small suite of computers in two rows that students used next to the laser cutting machine, separated by room dividers. You move between these two spaces and made use of communicating across the barrier to students and managing to communicate to students in the space you were standing in very well. Sometimes this meant !:1 work at a computer station where you sat down and effectively carried out tasks in front of the student as a demonstration. Sometimes this meant you going from the laser cutting machine to the computer terminal that showed the design that was being printed and making adjustments there with the student by your side.

Based on the above comments however you might want to think about the space as a teaching resource. What this would mean might be putting charts diagrams or handouts on the wall, or on the classroom dividers, or elsewhere in the room. Having a shelf or index of key information available. This could be online too. Having an FAQ poster (that is frequently asked questions) nearby. Perhaps other ways of utilizing the space itself to become more informative might be a conversation worth having in your team.

Summary. Overall James I was very impressed by your ability to be extremely practical and focused, multitask and support a number of students at the same time very effectively. Each student I observed seemed to be engaged, participating fully, actively learning, and enjoying the experience. Technical spaces might often not be evaluated as regularly as learning in classroom spaces. With this in mind you might want to think about how students, especially those that you have spent a significant amount of time working with in the workshop, or who have particularly interesting results, or who are from specific cohorts, like International Students, might be able to complete a short evaluation form and what information this might provide, that would be most useful to you in this context.

Thank you for letting me observe the session and hope your team mate returns soon! You did a wonderful job in their absence.

## Part Three

### Observee to reflect on the observer’s comments and describe how they will act on the feedback exchanged:

Thank you for the detailed feedback Tim! It was great having you in the space and being observed has felt like a really useful and interesting exercise.

It was a shame that my colleague Ameet was ill as I believe we bounce off each other well, knowing each others specific skills and interests and we often assist student queries as a team. It was a slightly unusual working day for me in that respect, as when it’s busy in the Creative Tech Lab it can often be quite overwhelming for just one member of staff in the space.

I'm pleased to hear that you felt I handled this challenge well, despite the juggling of different tasks. When our space is particularly busy it’s difficult to give each student an adequate amount of time and assistance and I’m always weighing up in my head how much 1 on 1 assistance a student will need with their specific query, so asking questions and understanding their technical knowledge/ability with specific programs they’re using is essential.

It’s really interesting hearing about my process of modelling and learning demonstrations. I find narrating what certain processes are doing helps simplify the technician jargon, which is essential in making digital processes more accessible to students who are potentially intimidated. I often find myself saying things like, “think of this process as..” Or “essentially what’s happening here is.. “ or something to that effect - explaining potential complex ideas in simple, digestible terms. It’s fascinating learning about and understanding the terminology of teaching processes that I’m doing, often subconsciously. Personally I’ve found that to be one of the more interesting parts of doing the PG Cert.

It’s interesting thinking of the copious amount of samples we have in the workshop as my teaching assistants, as you’ve explained to me. They’re invaluable in how I help students but they often raise more questions than answers. Going forward I definitely think it would be beneficial if they could both raise questions but in some situations also create instant answers. Integrating further resources into our teaching environment is something I definitely plan to do in the future - for example, a signposted board showing the same 3D prints at different time intervals so students can see at a glance what’s possible in their timeframes.

Overall this was a very new experience for me but the feedback has been invaluable!