

Work Experience in Audio Education: A Sound Experience for University and Business

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INTRODUCTION

Technical education in audio dates back to 1946 with the setting up of the first “Tonmeister” programme at Hochschule für Musik Detmold in Germany [1]. The development of a programme that combined education in music with engineering coincided with the publication of the words of the composer Arnold Schoenberg who suggested that in the future “soundmen will be trained in music, acoustics, physics, mechanics and related fields to a degree enabling them to control and improve the sonority of recordings, radio broadcasts and sound films” [2].

In the UK, formal education in sound remained for most of the 20th century as a niche undertaking with a small number of programmes including the United Kingdom’s version of the Tonmeister programme at The University of Surrey [3]. Over the last 20 years however there has been a marked increase in the number and range of audio related programmes with such titles and themes as Music Technology, Sound Engineering, Audio Technology amongst others.

With the growth in course provision has come an expansion in the involvement of business in such degrees which typically comes in a number of forms including guest lectures, workshops, site visits and work experience. It is strongly felt that this involvement is key to maintaining the relevant focus of such vocational programmes [3, 4].

Over the last 5 years the author has developed a number of projects at Glasgow Caledonian University (GCU) that offer work experience opportunities in a range of audio and related industries such as broadcasting, recording and live sound. A key element of each project is that a majority, if not all of the students’ activities, take place off campus. In addition in many cases the students have to negotiate their work

experience schedule directly with staff from the industrial partner and will receive feedback directly from those staff.

The case studies presented here discuss five different models of work experience and involve examples of both informal and formal learning experiences, those which are formatively and summatively assessed and experiences which last from a few hours to many months but all involve elements of industrial input.

1 STUDENT BACKGROUND

The students involved in the case studies presented were enrolled in one of the following programmes (or their predecessors)

- BSc(Hons) Audio Systems Engineering
(formerly BSc(Hons) Audio Technology with Electronics)
- BSc(Hons) Audio Technology
(formerly BSc(Hons) Audio Technology with Multimedia)

Both programmes aim to equip students to work in a range of audio and creative technology industries. GCU has over 20 years of experience in audio technology education and graduates of its programmes now work in a variety of job roles including

- Broadcast Engineer
- Games Sound Designer
- Sound Card Audio Designer
- Acoustician
- Multimedia Developer
- Lecturer
- Audio Technician
- Software Engineer
- Music Technology specialist in schools
- Technical Manager in Venue
- Further Study - M.Sc., Ph.D.

The main differences between the programmes are that the BSc(Hons) Audio System Engineering programme shares a number of modules with a traditional Electronic Engineering programme and is more focussed on the engineering aspects of audio. This programme is a four year course as in the norm for Honours degrees in Scottish Higher Education.

The BSc(Hons) Audio Technology is a two year programme that offers years 3 and 4 of an Honours degree. Students for this programme have already completed a two year Higher National Diploma in a Further Education college which is deemed to be equivalent of the first two years of an Honours degree. This programme does not include any shared modules with the mainstream Engineering programmes and is a more “technology” focussed view on audio.

Work experience is not mandatory on either programme and in all the work experience opportunities discussed the students have chosen to be involved.

2 INFORMAL V FORMAL LEARNING

The work experience case studies presented here are of two types. The first three can be categorised as informal learning opportunities as discussed by Eraut [5] where the learning takes place in an unstructured fashion based around professional work activities. In each case differing levels of support are provided by the staff from the industrial partners and assessment in these cases is formative.

Other key features of these informal experiences are they are usually simpler to set up for the academic partner, put less pressure on students and place fewer demands on the industrial partner.

The latter two cases studies are examples of formal learning experiences, which involve a more structured experience for the students along with the introduction of summative assessment. The inclusion of summative assessment clearly results in more work by staff to quantify the assessment requirements and subsequently grade submitted work. For the student there is also a requirement to prepare and reflect on assessment materials. In addition the formal requirements of assessment may have an impact on the industrial partners as they may be required to have an input into the final grade allocated in some way.

3 INFORMAL WORK EXPERIENCE CASE STUDIES

3.1 Case Study 1: Celtic Music Radio

Celtic Music Radio, a Glasgow based community radio station was the first work experience opportunity that was developed for audio students. Community radio in the UK is regulated by the UK government agency OFCOM and as the name suggests is designed to serve a local community. Celtic Music Radio is slightly different to most other community radio stations however, in that it serves a “community of interest” rather than a geographical community. However in keeping with other community radio stations it does offer accessible opportunities for students to gain valuable real world experience.

Quinn [6] has summarised the ways that community radio can allow students a greater level of practical involvement in day to day operations than commercial or state broadcasters as follows:

- with much smaller audiences the stakes are less and there is less at risk if a student makes a mistake
- budgets are much smaller and consequently community radio typically relies on volunteers particularly for ambitious programming such as two week outside broadcasts

The particular scenario that GCU students have been involved in is a fifteen day outside broadcast from Celtic Connections, the world’s largest Celtic Music festival. At the 2016 festival 14 students mixed the sound for over 60 artists during almost 90 hours of live broadcasting. This involved setting up and operating audio equipment, liaising with performers and presenters and working as part of a technical team, see figure 1.

Celtic Music Radio is a charity and does not have any employees, so this opportunity relies on the good will of the directors and volunteers of the station who are involved in planning and presenting at the outside broadcast. As a result this opportunity

provides the least level of input for the students from the industrial partner. Instead academic staff are in attendance to provide guidance and feedback.

This event receives no funding however but GCU has supported the opportunity by providing transport assistance and some funding for specialist equipment to use at the event.



Fig. 1. Student mixing sound at an Outside Broadcast with Celtic Music Radio

3.2 Case Study 2: Celtic Connections on Campus

Following on from the successful outside broadcast experience discussed above, the author organised a series of concerts called “Celtic Connections on Campus” as part of the official Celtic Connections 2016 festival. Featuring student artists, the 4 lunch time concerts were hosted on the GCU Campus and were open to the public. The concert series was a great success with an audience of over 120 each day to hear acts from colleges, Universities and schools across Scotland.

To facilitate the learning of the students and to ensure the smooth operation of the concert series a professional sound engineer was hired for the duration of the concert series. The students participated in a workshop on the first day to orient the students with the sound system to be used and prepare them fully for working at the subsequent concerts.

From a work experience point of view the students commented on being more nervous working in front of a live audience in comparison to an outside broadcast where the audience remains unseen. In both cases the audience numbers were similar, however having the audience in the room with you clearly added to the pressure felt by the students. In total 7 students worked over the five days, with all participating in the introductory day long workshop, followed by two concerts each, see figure 2.

The overall feedback from students for these experiences was very positive and can be summed up from a comment made in their evaluation:

“[The best bit about working at Celtic Connections was] being part of the team & interacting with people who are also passionate about live sound/radio/broadcast”



Fig. 2. Students working at Celtic Connections 2016

This project received funding from the University under its community outreach programme to pay for the hire of the sound engineer and PA system. So in this example the industrial input came from the freelance sound engineer and the interaction with the PA hire company who participated in the initial workshop. Employing a professional to supervise the concert series was also a key factor in persuading the organisers of the festival to allow this project to be part of the official festival. Celtic Connections is a well established festival brand and it was crucial that “Celtic Connections on Campus” maintained the expected level of experience for its audience. As it turned out the University and festival organisers received many compliments regarding the professionalism of the staging of the concert series.

3.3 Case Study 3: STV Glasgow

The third major informal learning experience opportunity was with a local TV station STV Glasgow. Local TV stations were setup in the UK in response to call for bids from OFCOM the regulator, in 2012. The winning bid for the Glasgow area was STV Glasgow, which is owned and operated by the STV Group PLC the current holder of the licences for ITV broadcasting for the whole of Scotland.

The local TV bid was jointly made along with Glasgow Caledonian University and as a result STV Glasgow has been very proactive in offering work experience opportunities in TV production to students of the University. On the technical side that has meant that one or two students has been on work experience with the TV station every week since just before the station went live in 2014.

In total over 60 students have taken up this experience. Each student has the opportunity to work on the live magazine TV show on the studio floor and in the TV galleries for one week assisting the technical staff. In addition a second week working on the daily outside broadcasts is available to students. This has involved students travelling to events and locations across the West of Scotland and assisting in the live broadcasts.

This case study differs from previous ones in that it is staff from STV Glasgow that organises and negotiates the work experience opportunity directly with students. And provides feedback if requested to the students involved.

4 FORMAL LEARNING WORK EXPERIENCE OPPORTUNITIES

4.1 Case Study 4: Volunteering in a Technical Role

This module was originally created to reflect that students could gain valuable experience by volunteering in a variety of scenarios, with the proviso that those scenarios matched with the technical nature of their programme of studies.

Volunteering in a Technical Role is a 10 ECTS credit module that has the following learning outcomes [7]:

On completion of this module, students should be able to

- Research their intended organisation, the industry in which it is placed and the opportunities within that industry.
- Plan their placement opportunity and intended employability skills to be gained
- Describe the technical challenges encountered and solutions developed during the placement
- Produce a portfolio of reflection relating to their volunteering experience

The students can access the work experience opportunity in two ways. In the first case the module leader has organised a number of opportunities with businesses with which he has links. These are offered to students on a competitive basis who apply for the opportunities in the similar way to a job application and then get chosen based on the following criteria:

- The quality of their application
- their academic record
- their timekeeping and punctuality
- their suitability for the post.

The decision is normally made by a panel of academics although on occasion the employer has been involved in the selection process.

In the second case the student organises their own work experience opportunity. Academic staff from the University will then discuss the requirements of the work experience with the employer.

The module requires the student to complete at least 60 hours of work with the employer. The nature of this work varies but ideally should include a significant element of technical work as well as other workplace activities such as attendance at meetings, appropriate training etc. As this opportunity takes place in tandem with timetabled classes, the employer co-ordinates and arranges the actual detail of the work in negotiation with the student to fit in with their studies.

Assessment takes the place of three assignments. The first assessment takes place prior to the commencement of the work experience and involves preparing a report covering the following:

The student will:

- Reflect on current position

- Research placement opportunity
- Plan for placement

This builds on their initial application and involves them thinking about what they want to achieve from the opportunity. The second assessment is a log or diary of their activities whilst on the work experience. Here they are encouraged where possible to be imaginative in terms of the range of materials that they present to catalogue their work. Finally the third assessment is a reflection of their time on work experience and how that might impact their future thoughts on work and study.



Fig. 3. Student on work experience at the Scottish Parliament

To date students have gained work experience in a range of organisations (see figure 3) including:

- TV and Radio Broadcasting
- Recording Studios
- Live PA Hire
- AV
- Theatre
- Installation and Design

As with most of the previous cases there is no funding in place to support these opportunities and their existence relies on the good will of the organisations.

4.2 Case Study 5: Commonwealth Games 2014

One unique and very rewarding work experience opportunity was GCU's involvement in the Commonwealth Games held in Glasgow in 2014. The Commonwealth Games 2014 was the largest multi-sport event ever to be held in Scotland with nearly 5000 athletes from 71 countries competing in 18 sports over 12 days. Thirty GCU students took part in the Host Broadcaster Training Initiative (HBTI), a work experience programme initiated by the host broadcaster SVGTv, who were responsible for the production of all the TV and radio output from the games.

Unlike the previous case studies the HBTI programme was funded by two government agencies and SVGTv to provide pre-event training and cover the costs of students at all the venues during the games [8]. GCU students were allocated to

work in the commentary positions at thirteen venues and the International Broadcasting Centre, see figure 4. As the work involved the use of specialist broadcasting equipment which was not covered as part of the normal curriculum, the author developed a bespoke training programme, “Giving 110%”, to fully prepare the GCU students.

Giving 110% drew heavily upon specialist staff and expertise within sports broadcasting and thanks to the assistance of some of the major broadcasting manufacturers, students gained access to some of the actual equipment that they would be using during the games for workshops.

Giving 110% therefore augmented the HBTI programme for GCU students, which included the following

- Site visits to a sports OB and to the media centre
- Industry standard Health and Safety Certificate
- Visit to the campus of a £5 million OB truck
- Talks from various industry specialists about broadcasting in general and the Commonwealth Games in particular
- Workshops using broadcasting equipment

Students were then allocated a particular venue to work at and completed between 30 and 100 hours of practical experience co-ordinating commentary positions. [9]



Fig. 4. Commonwealth Games 2014

Students were given the opportunity to utilise their experiences at the games for the module Volunteering in a Technical Role as discussed in case study 4 to gain credit - around 30% did so.

5 STUDENT VIEW

The benefits of work experience are well documented and in the creative industries where there is such a concentration of self employed and micro enterprises [9] the benefits to both students and employers are if anything even greater. But how do students view work experience? A survey was carried out of all audio students who could have participated in work experience. 33 students responded giving a 24% response rate from the full population. Of those 33 respondents 73% had been involved in one of the work experience opportunities described above.

Work experience is seen as being of value, with 94% of students rating it as very important or important to them. Almost all of the students felt that the University should be providing such opportunities, but interestingly almost all of them expressed the opinion that the student should also be responsible for generating their own work experience opportunities. Comments here included

“there’s nothing stopping students asking around for work placements themselves”

“companies themselves[should provide work experience opportunities]”

Indeed almost all of the respondents had actually arranged their own work experience opportunity.

When asked the reasons why they were not involved in University organised work experience opportunities, almost half said that they did not have enough time available to take part in work experience activities in addition to their core course studies. This seems surprising given the focus of their chosen degree programme and the flexibility in terms of commitment that the different case studies offered. The reasoning behind this viewpoint however, is maybe expanded upon by the fact that the second major reason for non-participation was that the opportunities on offer were not in their area of interest. Around one in five respondents stated that they were not interested in any of the opportunities on offer and suggested that opportunities should be made available in a wider range of areas. If time is limited students are perhaps being strategic in not choosing opportunities that are not directly linked to their chosen career paths.

The students were asked to elaborate on what they had gained from any work experience that they had been involved with and their comments listed a range of benefits including

- A better understanding how professionals work in audio
- Acquisition of new skills and knowledge
- Industry networking and making new friends
- Increased confidence in practical situations

This last point is one that is backed up in anecdotal evidence, which suggests that although students clearly recognise the benefits of work experience, a lack of confidence can also play a part in them choosing not to participate in the available opportunities.

6 CONCLUSIONS

It appears to be clear that work experience is beneficial to students and employers alike. In addition contact with industry is very useful to academic staff in terms of keeping their knowledge and skills up to date and relevant.

There is a range of models of work experience some of which are presented here. They can demand varying levels of input and support from industry and academia alike, be offered over varying timescales and can provide a formal or informal learning experience. A key element of each project is that it the majority if not all of the students’ activities take place off campus. In addition in many cases the students have to negotiate their work experience schedule directly with staff from an industrial partner and will receive feedback directly from those staff. In the author’s opinion this aspect makes them of greater value to the students in that they are not seen as part of the “normal” curriculum. This in turn appears to engender a more professional attitude by the students involved.

Future work is planned to consider more closely the advantages and disadvantages of each of the models presented here from the student point of view, particularly with respect to the different experiences of informal and formal learning. And to see if any of the models can provide lessons for the wider engineering community.

In addition the factors that prevent students from engaging in such valuable experiences are clearly worth exploring further. Given the flexibility in the current arrangements it is unclear how this can be managed but further work with students will hopefully shed some light on possible ways forward in this regards.

It is hoped to expand the range of work experience opportunities but this will rely on certain industries being more open to providing such opportunities. And also requires additional time by academic staff to source and support such opportunities. Finally it appears that there is a hidden “fear” factor that dissuades students from engaging in work experience opportunities.

The author is exploring two possibilities to overcome this issue. The first is to use student mentors to support their peers in such environments. The use of mentors is commonplace in Higher Education and is extensively used within the author’s own institution. What is planned however would be to use mentors to organise and supervise appropriate technical work experience opportunities to better prepare students for practical environments. The second is to explore the use of motivational interviewing techniques, a common approach in other disciplines but one now being used in technical areas [10], to help students overcome confidence issues.

As the number and range of projects increases, further work will be required to fully explore these and other emerging issues.

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