Moderators' Report/ Principal Moderator Feedback

Summer 2016

GCE Music Technology (6MT03)

The quality of the teaching and learning is evident from the submissions. It is encouraging to see that centres usually have well equipped facilities and pay attention to recording environments, using acoustic treatment where appropriate. Most centres have a separate control room and good quality monitors. Best practice is that students work on all their projects using the control room monitors; mixing any of the tasks on headphones rarely leads to a successful finished product.

The software choices tend to be similar for most centres, with the well known big two being used in most cases. All the professional sequencing / DAW packages now offer a suitable range of tools for sound creation and processing.

Task 3A Integrated Sequence

The two choices for this series of exams were Monument by Röyksopp and Limbo by Sin Cos Tan. Both pieces had a number of production features that required careful use of effects and synthesis to recreate. These are assessed in various ways depending on the nature of the production feature: effects and synthesis such as filtering are assessed under style and creativity; enveloping is assessed under articulation; shaping of timbres is assessed under timbre.

The shaping and editing of the sounds, including use of effects, also has a contribution to other parts of finished piece. Balance, pan, dynamics, are all affected by choices made elsewhere. Like all production tasks, the approach needs to be holistic to be successful.

The same is true of the integration of live audio. For both these pieces, most candidates recorded just the vocals which is the most sensible approach as it reflects the originals (with the exception of some guitar in Limbo). There are only three audio tracks allowed, so in both songs these were needed to fully realise the vocal parts. Substituting synthesised timbres for vocals is rarely successful and very few candidates took this approach.

Limbo was the more popular choice but only by a small amount.

The best work was typified by:

- accurate and mostly complete musical parts
- convincing timbres with evidence of editing and sound shaping using synthesis
- shaping of MIDI performances using velocity, pitch bends, note length editing where appropriate
- processing and effects use to match the original including the creative use of effects present in both pieces
- clean, clear vocal capture, suitable dynamic processing and careful use of EQ which had challenges for both pieces
- balance and pan that reflects the original; placement of vocals in particular can be challenging

Areas that presented difficulties for each piece are summarised below (similarly in examples that were successful most of these features would be handled well):

Monument

- Errors in bass line / movements at end of phrase / changes in pre chorus and chorus. A surprising number of submissions added a sub bass drone to pre chorus and chorus which is not present in the original (there are pads entering at those points). Rhythm of bass line was sometimes misjudged; very few managed the subtle swing/late placement of the bassline
- Incorrect bassline in end section
- Most candidates attempted the glitchy skips in the bassline and did a reasonable job; sometimes these were omitted or an incorrect rhythm used
- Hi hat part omitted or in the wrong places; incorrect pattern
- Main drum pattern usually complete; gated reverb on snare not often present
- Synth timbres including bass synth were often reasonably close; issues with timbre is usually missing parts
- Vamp synth omitted or in wrong places; incorrect chords
- Filtering of bass synth and vamp chords was usually attempted but could be clumsy at times
- The envelope changes in bass and vamp synth were rarely handled well
- Synth run doubled by vocoded/filtered sample usually attempted but often with pitch errors in these two parts (steps up at end of phrase)
- Electric piano echo on breakdown often omitted
- Layered pads on pre-chorus and chorus missing or incomplete
- Complex layered pads with filtering in final breakdown attempted but often incomplete
- Usually some sense of contrast, sense of build often misjudged
- Booms and risers towards end section sometimes attempted
- Main vocal thin EQ unsuccessful
- Backing vocal effects, vocoder/filtering not attempted or misjudged
- Backing vocals omitted; these are assessed as missing parts/missing timbres

Limbo

- Errors in bass pattern; low octave at end of phrase omitted, errors in pre chorus and chorus including parts in wrong octave
- Mute guitar pattern sometimes incorrect; often omitted on pre-chorus
- Organ repeated 1/8th notes omitted on pre-chorus
- Cabasa part omitted, incorrect or playing throughout
- Organ parts in wrong octave (especially high motif)
- Contrasting effects on organ misjudged; chords slightly distorted and dry; high motif clean and large reverb
- Large reverb on tambouring usually attempted but often misjudged
- Contrast in vocal treatments between verse (thin distorted, small reverb) and chorus (clean and more reverb)
- Large reverbs on chorus backing vocals & piano, often misjudged or on wrong parts)
- Missing full piano and strings on chorus
- Synth solo usually had correct delay but articulation was not always successful
- Timbres often needed more attention; piano quite bright and thin, tambourine was challenging though many candidates did attempt the different pitches
- Most candidates managed a sense of contrast but builds towards the end not often successful

- Balance was particularly difficult on this as the original takes some unusual approaches such as the very prominent tambourine and the big contrasts in effects field
- Backing vocals omitted; these are assessed as missing parts/missing timbres

Task 3B Multi-track Recording

As mentioned, facilities for recording are addressed by the majority of centres, and suitable microphones, recording space and mixing environment are clearly available to students in all but a very few cases. This work cannot be successfully carried out without these facilities, in particular the close critical listening skills required to be successful in this task. It is evident that many centres develop these skills on their courses and pay close attention to creating the right listening and work environment.

Choice of material continues to play a big part in the success of the final piece. Candidates who make suitable choices usually have a more realistic goal to work to. Pieces chosen need to be:

- Played to a good standard with control and accuracy
- Use straightforward recording and production techniques

At this level, there are plenty of skills needed in managing a recording of a simple, basic production; pieces with complex music or production are usually beyond the capability of candidates and are not necessary to demonstrate the assessed capabilities and outcomes.

Some centres clearly offer a lot of support in helping students to choose a piece to record, even to the extent of all candidates recording the same piece of music, or one of a few pieces. Whilst this is clearly one option to ensure suitable material is recorded, there are a number of disadvantages:

- Students do not have complete ownership of the project
- Can lead to a 'production line' approach to recording with very similar sounding finished products
- It can be argued that the learning experience is devalued; students do not have to make decisions about what makes a piece suitable and realistic as a recording project, then manage the performers of that particular piece, consider the unique challenges of how to produce the recording and do the final mix

The best work in this category did show some very high quality recordings that would not have been out of place on a band demo or independent release. In these cases, all aspects assessed showed considerable good practice in the assessed components.

Strengths and weaknesses demonstrated in this task are listed below:

- Capture if often handled quite well for most instruments
- Difficulties arise with drum overheads; balance and tone of cymbals and hi hats sometimes need more careful consideration. This might be a case of room treatment/positioning of kit in room as well as microphone type, polar pattern and placement
- Vocal parts sometimes lack focus or suffer from drifting on/off mic. The role of producer is quality control, and close listening is needed during recording to ensure cohesive delivery
- Piano, strings and percussion often lack clarity

- Brass, sax, acoustic guitars are usually handled quite well
- EQ can often suffer from problems in the bass end, either lack of bass or uncontrolled and indistinct frequency distribution. This is an area where monitors are essential for making decisions
- Mid range can be congested; log books often indicate large boosts of 10 or 15 dB. It is usually better to remove unwanted frequencies than boost desired areas
- Dynamics processing had huge variations, from almost none to extreme squashing and pumping. Compression always depends on the material being processed, and is not a substitute for uncontrolled dynamics in performance. The best work showed up in clear, snappy drum mixes, present vocals, even bass delivery and general cohesion across the mix
- Effects use in the best work showed use of perhaps two well-selected and contrasting reverbs, used as send and return on a number of parts in the mix to ensure cohesion. There might also be some subtle delay on some lead parts. In the majority of work, there was little consistent use of reverb across the whole mix, and many students choose an alarmingly high number of individual reverbs on inserts. This has the disadvantage of making balance unpredictable, as changing the wet/dry mix on an insert changes the balance of the dry signal as well as the amount of reverb so the two aspects can never be handled independently
- Balance of instruments and vocals depends a lot on successful capture and processing. Again it is fairly evident where monitors have not been used and headphones have been relied on instead. Listening to finished mixes on a variety of systems, and making adjustments through several mix stages is standard practice and should be planned for in carrying out the task
- Stereo placement is often handled quite well; extreme width can be problematic especially for stereo placements such as drum overheads. Poor balance can lead to pan problems on loud parts. Some mixes still get submitted as mono except for use of stereo reverb.

Task 3C Composing Using Technology

The three briefs were:

- Project Horizon, a sci-fi film with the video supplied but stripped of all sound
- 'The City Planners', a poem by Margaret Atwood with the text supplied
- Sampling brief based on the theme of Space exploration where students were required to source a set of samples to use in developing their composition and reflecting the theme.

Space was the most popular, but only slightly with 'The City Planners' also chosen by many candidates. The Film brief was still chosen by a good number of candidates. It is always pleasing to see that all tasks are popular; in this series the poem was a more popular choice than is sometimes the case. The intended approach to this task is that the technology through sound design plays an integral role in the compositional process. Musical elements such as timbre and rhythm are developed and enhanced by exploration of sound manipulation; new and original ideas are generated that could only be achieved by using the technology.

The standards achieved were similar to recent years. The very best work showed the following features:

- Carefully considered response to the brief, with some imagination and originality
- A wide range of sound design, incorporating technically controlled and musically effective use of sampling, synthesis, creative effects and other manipulation techniques
- A convincing use of a range of stylistic features
- Skilful control of musical ideas; cohesion and development within the composition; diversity in use of musical elements such as melody, harmony and rhythm; clear structure that supports the brief
- Well balanced mix with careful presentation

Problems that prevented candidates accessing the higher marks were commonly from several of the areas listed below:

- Little development of musical ideas e.g. the same chord pattern used throughout
- Unconvincing rhythmic interplay and variation
- Unchanging texture
- Little consideration of structure or transitions clumsily handled
- Simplistic or underdeveloped melodic ideas
- Little use of technology, or misjudgements in application of sound design techniques. This could include unsubtle use of extreme effects; a lack of consideration for the musical role of samples such as poor timing; poor quality samples that have not been edited to improve the sound; predictable, simplistic ideas such as vinyl crackle sample used throughout, risers and booms copied and pasted from sample libraries
- Response to brief is not fully considered; aspects of the action, moods, or themes might be ignored. Timing might not be fully considered including the requirement to complete a 3 minute long piece of music
- The piece as a whole lacks cohesion
- Stylistic features not convincing or only partially successful
- Elements of the mix and presentation of the final piece were not fully considered

Specific strengths and weaknesses relating to each task:

1. Project Horizon

Successes

- A range of moods and paces that were well timed and suitable for the development of the story
- Sound design that reflected the futuristic theme
- Good timing and inclusion of hit points, often with sound design but also with musical pointers
- Use of themes and motifs for the main character and the bot

Areas for improvement

- Long pads/synth washes that were unvaried through hit points and mood/pace changes
- Inclusion of dialogue from the original video; dialogue is not part of the composition but if submitted it has to be assessed as part of the music, leading to poor outcomes

2. The City Planners

Successes

- Some excellent moods, exploring sparse or bleak urban styles with plenty of interesting technology based timbres and creative effects
- Careful consideration of lyrics, including re-ordering and adapting the original to present a unique look at the subject
- Skilful use of rap, often with new lyrics, and combined with sung sections

Areas for improvement

- Narration of the text with little character or manipulation, not well integrated with musical ideas
- A sparse soundscape that leads to a lack of musical development and variety
- Minimal use of text, or obscured through poor audio handling
- On rare occasions no vocal parts were used, which led to no marks being awarded for response to brief. The text must be included in some form

3. Space

Successes

- Choice of samples from a range of sources, carefully combined to create a sense of narrative
- Narrative supported by musical development
- Full exploitation of the range of sound design opportunities to reflect Space exploration and travel

Areas for improvement

- Predictable choice of samples; Countdown, Kennedy speech, Columbia disaster
- Samples not editing to fit rhythmically with the music
- Lack of controlled sample manipulation to create original and interesting timbres that integrate with the musical ideas

Log books and submission of work

Examiners are always pleased to receive well-organised and timely submissions. Log books that at complete with well presented and succinct, relevant information are particularly useful. The space provided in the log books is adequate to present all the important features of the tasks, and additional screen shots may not provide any useful additional information. In particular a print out of a mix window only lists processing and effects, but says nothing about settings.

As always there were a few cases of CD errors. It is important that students check their CDs before they are sent, as with any production, the whole piece needs to be checked whenever it is transferred from one medium to another. Examiners appreciate the cooperation they receive from centres when issues like these need to be resolved.