

Using Mobile Apps in Musical Futures

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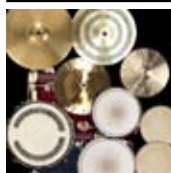
Due to the proliferation of mobile phones, iPods and other portable devices, as well as the advent of open platforms for software developers on iOS and Android etc, there is the opportunity for any bedroom programmer to develop software and sell it in the market place. Tim Hallas provides a comprehensive review of Mobile Phone Apps that could be used to enhance and support Musical Futures work in the classroom.

MUSIC CREATION

The obvious place to start with Apps suitable for Musical Futures are those that are used for the creation of music itself. Many software designers have done this in different ways including:

- Emulations of real instruments
- New interfaces for music creation

The first of these is pretty obvious: if you want to play a drum kit on your device you put a picture of a kit on screen and install some samples to trigger as each drum picture is hit. There are emulations of pretty much any 'traditional' instrument but also some emulations of more recent electronic instruments, including a number of Korg synthesisers and hundreds of theremin copies.



Drum Kit Pro (iOS)

Drum Kit (Android)

These two Apps available on different platforms effectively do the same thing. They are designed as playable emulations of a drum kit with a range of different styles and sounds. Both Apps include a selection of samples in acoustic and electric kits with the option to download more instruments and options from within the application. The only advantage of one over the other is the ability in the Android App to add as many pads on screen as you wish.

COST: £0.69/Free

WEBLINK:

<http://itunes.apple.com/gb/app/drum-kit-pro/id285700010?mt=8>

https://market.android.com/details?id=com.phellax.drum&feature=search_result



Piano!! (iOS)

xPiano (Android)

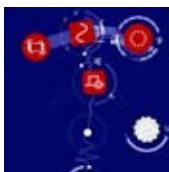
Both Apps contain simple emulations of a piano keyboard and include a number of octaves that can be slid around the screen of the handset. The Android App includes a range of sounds for students to use in performance. However, 'Piano!!' includes the note names on each key to help students unfamiliar with the piano keyboard to learn tunes.

COST: Free

WEBLINK:

<http://itunes.apple.com/gb/app/piano!!/id448310707?mt=8>

https://market.android.com/details?id=com.cyandroid.piano&feature=search_result



Reactable (iOS & Android)

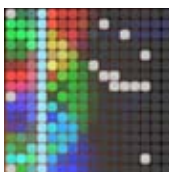
This is an emulation of a real 'instrument' that is played by placing blocks onto a big table from which a computer recognises a position and direction from which it then creates synth sounds or triggers samples. The mobile version of this is great for the Musical Futures classroom, particularly for students with no musical experience. Quite impressive music can be created instantly by simply dragging and dropping items onto the screen and seeing how they interact with one another.

COST: £2.99/£7.00

WEBLINK:

<http://itunes.apple.com/gb/app/reactable-mobile/id381127666?mt=8>

https://market.android.com/details?id=com.reactable&feature=search_result



Beatwave (iOS)

Music Grid (Android)

About five years ago Yamaha released an electronic instrument called the Tenori-On which was a hit due to its unique LED interface. The drawback of the Tenori-On for Musical Futures classrooms is the price – at over £500 the units are prohibitively expensive. However, with the latest portable devices developers were very quickly creating emulations of the instrument. There are a range of versions available but those listed above are two of the best. Beatwave includes the ability to have up to four different layers running at once, includes several different timbres and in-App purchases to expand the capabilities of the App. Music Grid is more basic but updates are regular.

COST: Both free

WEBLINK:

<http://itunes.apple.com/gb/app/beatwave/id363718254?mt=8>

https://market.android.com/details?id=net.bramp.musicgrid&feature=search_result

MUSIC RESOURCES

The first real 'music' Apps that started to appear were in this category, because they tend to be used for information or other resources, and because the Apps were relatively quick to make. As a large amount of the data for these Apps has previously appeared on websites and CD-Roms the only thing that was needed was the development of a new interface to access the data for the handset. There are too many categories to list here, but software developers have created Apps with chord charts, backing tracks, fingering charts, scale finders, not to mention countless tuners and metronomes.



Guitar Toolkit (iOS)

Ultimate Guitar Tools (iOS & Android)

These resource Apps contain useful tools for guitarists, including a very accurate tuner that uses the built-in microphone of the mobile device. The metronome is always useful for students learning about pulse and allows the students to access the timing information while working on their own. However, the biggest resources are the chord libraries, scale libraries and access to information for alternate tunings that allow students to learn pieces independently.

COST: £2.49/£2.44

WEBLINK:

<http://itunes.apple.com/gb/app/guitartoolkit/id284962368?mt=8>

https://market.android.com/details?id=com.ultimateguitar.tools&feature=search_result



iReal Book (iOS & Android)

The 'Real' book has been a staple of jazz musicians for a long time. There is now a mobile version of it that is designed to display the chords to any chart or song in mobile displays. Although for copyright reasons there are no songs installed on it, you can put songs in and download them. The main advantage of this App is that it includes automatic accompaniment, which follows the chords in a range of styles to allow students to play with a band instantly.

COST: £5.49/£6.99

WEBLINK:

<http://itunes.apple.com/gb/app/ireal-b/id298206806?mt=8>

https://market.android.com/details?id=com.massimobiolcati.irealb&feature=search_result



Ultimate Guitar Tabs (iOS & Android)

Unlike the iReal Book, Ultimate Guitar Tabs does include the chord charts for millions of songs. However, it is actually an interface for their website and therefore requires an Internet connection. Contrary to what the name of the App implies, this resource actually contains Tabs for most popular instruments including drums and bass. The only disadvantage of this resource is that it isn't always accurate as the content is generated by users. For use in the Musical Futures classroom however, it is usually possible to find something accurate enough for getting started with learning a song.

COST: £1.99/£1.82

WEBLINK:

<http://itunes.apple.com/gb/app/ultimate-guitar-tabs/id357828853?mt=8>

https://market.android.com/details?id=com.ultimateguitar.tabs&feature=search_result



AmpliTube (iOS)

GhettoAmp (Android)

Most mobile operating systems now sell versions of amplifier emulations. They allow you to connect your guitar to the device's microphone/headphone socket (normally through an additional adaptor) and adjust the included amps and effects to create the chosen sound. The advantage is that everyone can have their own amp – and when connected to a JamHub (www.jamhub.com) or similar everyone can be on headphones as well. AmpliTube includes very few sounds, but you can pay to expand the range of amplifiers and effects. GhettoAmp includes three sounds to start with, which is better but it can't be expanded currently.

COST: AmpliTube: Free / GhettoAmp: £0.70

WEBLINK:

<http://itunes.apple.com/gb/app/amplitude-free/id373309342?mt=8>

https://market.android.com/details?id=com.ghettoamp.android.app&feature=search_result

OTHER APPS

These are the Apps that don't really fall into either category, they aren't clear-cut creative applications, nor do they have massive resources for instrumentalists. However, they all do have a musical output in some way. They include musical games, activities and other freaky Apps involving movement and personal interaction. (PTO)



RjDj (iOS & Some parts on Android)

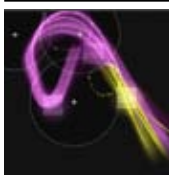
It is quite difficult to explain what RjDj is, or how it works without seeing it in action! It is an interface that uses all the different elements of an iOS device to generate sounds. It uses the accelerometer, compass, GPS and camera to create sounds and music based on how you move, interact with the handset and what is going on around you in the world. For students with little musical experience it can be quite liberating to give them a pair of headphones and send them off round the school to create music based on their surroundings. There are more in-App purchases available for different interfaces and new sounds.

COST: Free

WEBLINK:

<http://itunes.apple.com/gb/app/rjdj/id290626964?mt=8>

https://market.android.com/details?id=cx.mccormick.canofbeats&feature=search_result



Auditorium (iOS and available on Web)

A very simple game, that generates swirling sound worlds when each level is completed and builds up and changes as you work. The premise is very simple – there is a stream of sound that needs to be directed to the various output points. You have to steer it using the directional arrows on screen. However it isn't as simple as it sounds and students can get stuck very quickly! I only use this at the end of lessons and as a reward for good sessions. Because it is available online as well, students can easily access it at home.

COST: Free

WEBLINK:

<http://itunes.apple.com/gb/app/auditorium/id333186527?mt=8>

www.playauditorium.com



MadPad (iOS)

MadPad is subtitled 'Remix Your Life', which roughly sums up this App. It allows users to record short snippets of video from the built-in camera in the phone or portable device and then it generates samples from the clips and allows you to play them like a drum machine or sampler. The video and audio can then be exported from the device and uploaded directly to YouTube for saving and peer sharing. This App is only available on iOS at the moment with nothing similar on other platforms.

COST: £0.69

WEBLINK:

<http://itunes.apple.com/gb/app/madpad-remix-your-life/id456072329?mt=8>

CASE STUDIES

CASE STUDY 1: Trafalgar Primary School, Victoria, Australia

Lead by Ben Smith Trafalgar Primary School has developed the use of mobile technology in their Musical Futures sessions. Ben has been introducing the students to iPads and incorporating relevant Apps into his schemes of work.

This began by using the iPads for simple things including finding guitar tablature, and using the Internet and YouTube while away from traditional workstation computers. Students can access the

Internet on the school iPads and on their own personal iDevices, allowing access to thousands of pieces of music and performances on YouTube and other websites. With the headphone output connected to mixers students have been able to play along with live performances and the original artists' recordings.

Ben then began to expand the range of activities available on the iPads, including creative software

such as *GarageBand*, *ElectroBeats* and others. These pieces of software go beyond the simple resources of YouTube and the Internet, and require the user to create and be involved in the musical process themselves. Ben describes the advantages of using iPads in the classroom:

“The beauty of using apps as instruments in a ‘live’ music environment is that students suffering from broken limbs can still play an instrument and contribute in a meaningful and musical way. It adds another level of instrumentation and also allows us to create different music.”

Ben now uses an even wider range of music Apps including those that emulate guitar amplifiers and effects pedals, instrument emulations including piano, synths and drums. His next project with the students at Trafalgar Primary will be a composition project based around *O-Generator*, which although its native screen size is for the iPhone/iPod touch, still works well on the iPads.

www.trafaps.vic.edu.au/

www.youtube.com/user/TrafPS

 @BDSmith

CASE STUDY 2: Hertfordshire Music Service, UK

Hertfordshire was one of three pathfinder projects of Musical Futures and its ethos is engrained in the teaching of many of the secondary schools. The Music Service was keen to continue their commitment to MF beyond the pilot years, and recently invested in a suite of iPod Touches, which Tim Hallas has been using in classes more or less constantly since. They are used as a tool to engage students at their own level and using technology they might actually have at home or with them at school. Hertfordshire had previously been using a suite of MacBooks, which while they were considered very cool by the students, they were unaffordable for the vast majority of students and schools alike.

Tim began working with simple Apps that allowed instant musical gratification including *Beatwave* (an emulation of the Yamaha Tenori-On, see above) where the simple grid interface and mostly pentatonic scales means that all things entered on it sound good. He also started using other simple graphic music creation Apps including *Gliss* (<http://itunes.apple.com/gb/app/gliss/id347383589?mt=8>) and *Soundrop* (<http://itunes.apple.com/us/app/soundrop/id364871590?mt=8>). Although the musical output of some of these Apps is negligible to begin with, in the hands of a good student some very high quality music can be created, and

other students benefit by having an engaging time with music.

For older students Tim has experimented with more powerful applications including, *nTrack* (<http://ntrack.com/ios-multitrack-studio.php>) and *NanoStudio* (<http://itunes.apple.com/gb/app/nanostudio/id382263651?mt=8>) which are fully fledged sequencers including MIDI note entry and editing, synthesis and sampling. He also uses the synthesiser emulations with A-Level music technology students as a simple way into the subject before they start on the more complicated synths found in Logic or Cubase.


Tim says: “My biggest aim in my Musical Futures sessions is that students should leave their music lessons having had a good time and wanting to continue making music after they have left the classroom. To aid this I include a lot of games and activities where music is the outcome without necessarily being the source material: the touch interface on modern phones is very suited to this style of music creation. Apps I use for this include *Auditorium* (see above), and *RjDj* (see above). I also want my classes to be sustainable beyond the classroom, to this end most of the Apps that I use are either free or very cheap so that students can download them at home and continue music making there.”



About the author

Tim Hallas works for Hertfordshire Music Service as the Consultant for Music Technology and Head of Broxbourne, Hertford & Ware Music Centre. He teaches music and music technology to all ages from KS2 to KS5. He also works as a freelance writer for Music Tech Magazine and is the Digital Learning Editor for Music Education UK and Sg. In his spare time, when he has any, he still likes to play guitar.

His website www.theapptitudetest.co.uk contains in-depth and updated reviews of Apps suitable for music education.

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