

Courtney Smyth – Production Exercise #1

INTENTION

I am making a non-diegetic soundscape to back up the visual element of my film. Therefore, it is necessary to find the best sound that I can when recording and altering sounds before using them in the soundscape, which will support the visuals of my film.

My intention therefore is to use Garageband (version 10.0.0) and Audacity (version 2.0.5) and compare different ways of:

• **Recording sounds**

• Which program is easier and more accessible to use?

• Which program produces a greater quality of sound?

• *Microphones* - I will compare use of an external microphone (the Rode shotgun videomic) as well as using the internal microphone of the computer. I will need to become familiar with the external microphone and learn how to use it properly as well as how to set it up with the laptop and each program, making sure the settings are appropriate.

• *Background noise* - I will try recording in an environment with and without background noises with each microphone. As some sounds for my final soundscape may need to be recorded in a setting with background noise (if there is no way around it), I will see if there is much difference in the audio or if it is a sound I could actually work into the soundscape. For trial background noise I could set up a fan and/or have people walking, tapping or scrunching clothes in the background as well as a CD quietly playing

• **Altering sounds**

• Which program allows me to easily manipulate sounds to achieve clarity or a variety of effects?

• I want to achieve a clear sounding voice from recording which can then have effects put over it if some parts of the audio need to be altered in the final soundscape. I want to experiment with effects that the program offers. If neither sound is as clear as I would like it to be, I want to see if there is a way that I can edit out the fuzziness or any other noises that may be interfering in the clip.

EVALUATION

Recording Sounds

Which program is easier and more accessible to use?

When I started the programs, both were fairly different in terms of layout, however they were both easy to record in and had the same buttons and controls when recording which I was expecting.

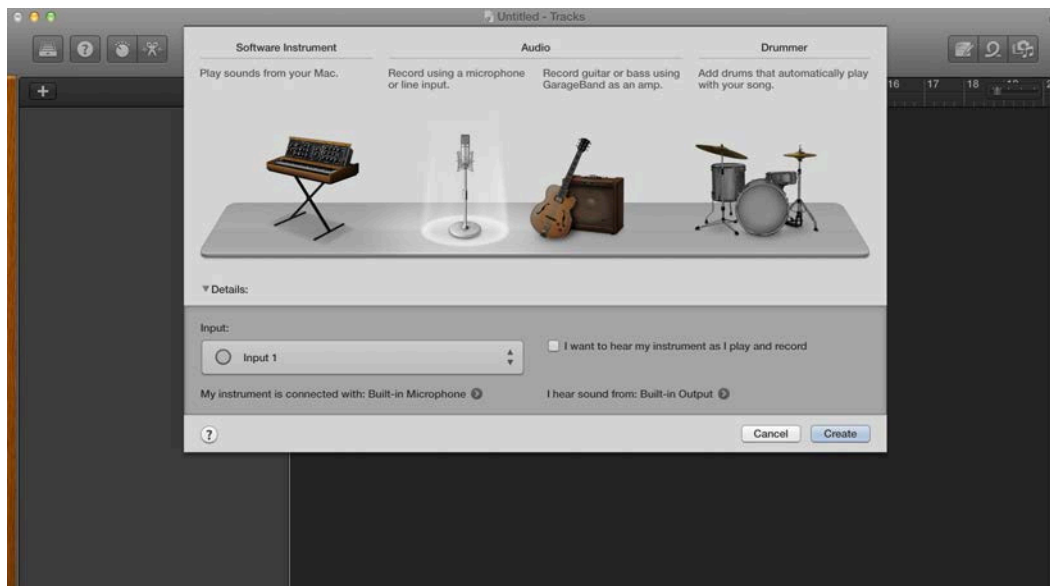


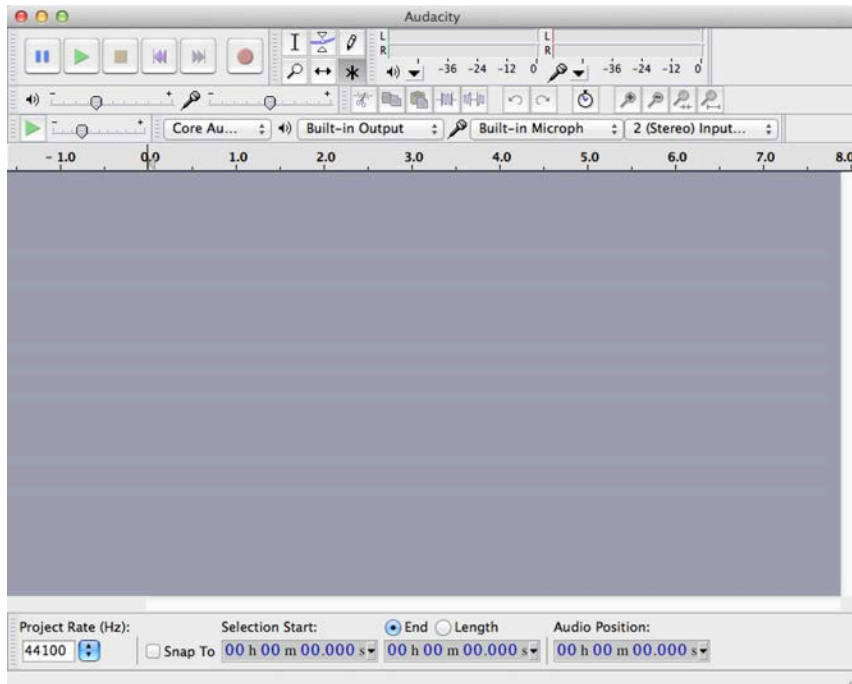
- Audacity



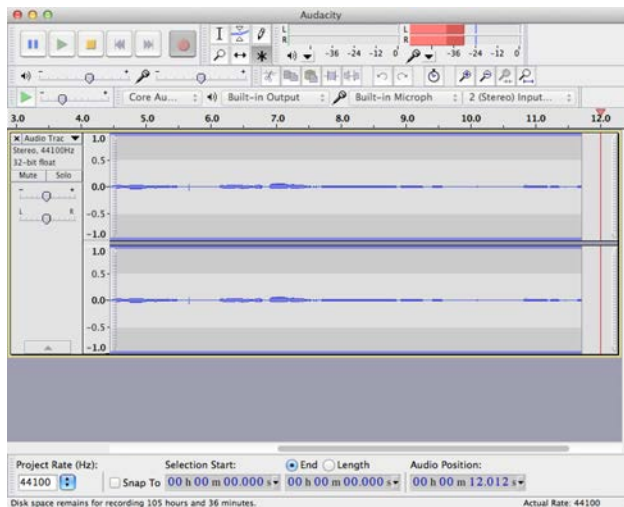
- GarageBand

In GarageBand, there was an option for audio recordings (such as voice) which was the option I needed and selected. The other options were 'Software Instrument' which allowed me to play sounds from my Mac and 'Drummer' which matched drums to a song. Audacity only had one option to record sound externally, rather than create sound in the program.





When recording sounds, both programs allowed me to see the input level. Audacity showed this with a decibel measure with red measure rising and falling with volume, whereas GarageBand only showed me with a green line which rose and fell with varying volumes, without an indication of decibels.



The red bar in the top right shows the input volume in Audacity as you are recording. On the soundwaves of material being recorded, the area between the dark grey lines show an ideal volume to record at. Any waves that exceed into the darker grey areas could become rougher and lose quality or come as a shock to the audience.

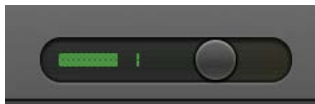
This could actually work in my product during the more climactic moments, but most of the time, these lines will allow me to see where an ideal volume is when I record.



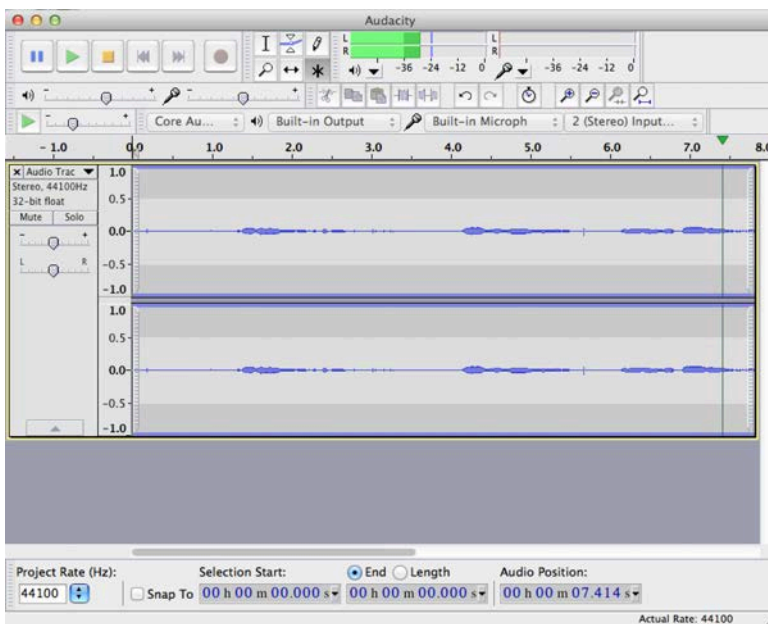
- Input volume.



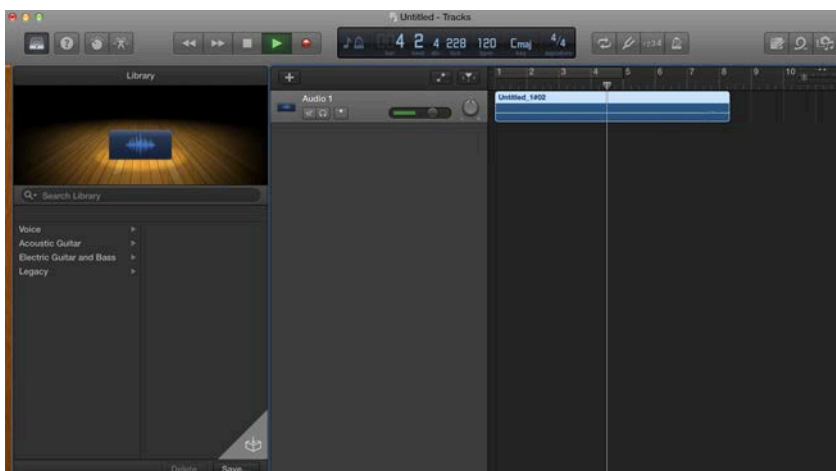
The green bar next to 'Audio1' shows the input volume as you record. GarageBand does not have the same dark and light grey horizontal lines as Audacity does on the recording track and therefore I can not see where an ideal volume range is.



- Input Volume.



During playback, Audacity showed me the output volume with a green bar, right next to where it showed me the input volume.



In GarageBand playback, the same bar which measured the input showed me the output volume.

Audacity also allowed me to alter the input and output volume with the controls pictured. They were part of the main control panel and very easy to access.



Everything I needed to see whilst recording such as input volume was all on one screen in Audacity.

GarageBand was not quite as detailed and while it had many of the same components, they were not quite as advanced as Audacity, not allowing me to fully know what was being recorded.

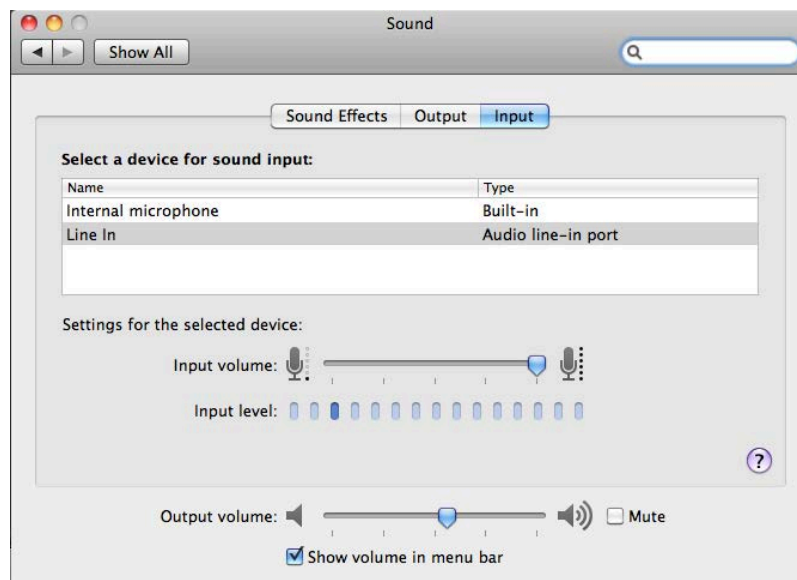
Audacity was also much faster on my computer. Garageband often froze up meaning I had to force quit several times. This could cause potential problems in my final product if I hadn't saved long beforehand.

Which program produces a greater quality of sound?

Microphones.

I found that the quality of recording using the laptop internal microphone was the same in each program. I found that the recording was very clear and crisp and my voice was very audible.

When I plugged the Rode microphone in to try and record with that, it was not recognised in the programs or even in the laptop. My computer only has an output plug for headphones and not one for input. I also tried the Yeti microphone, which had a USB connector. I had not intended to use this but thought that a USB connector might solve my issue of compatibility with my laptop. Again, this was not recognised by my laptop or either of the programs.

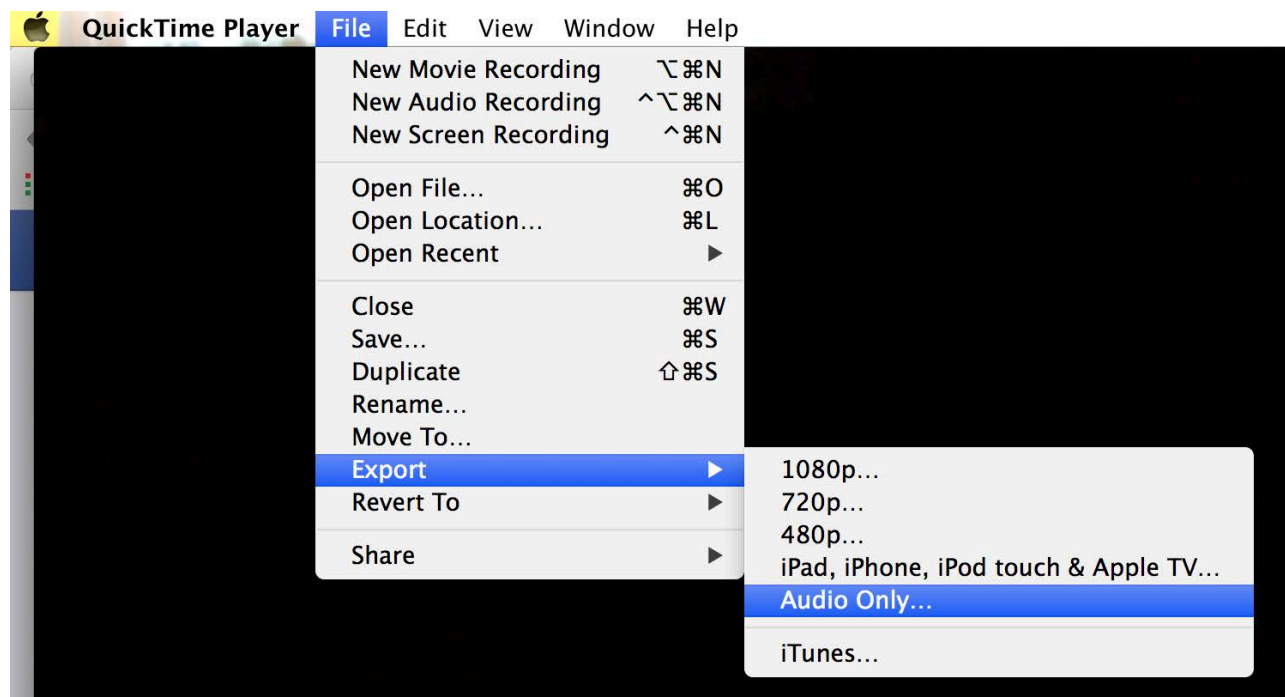


I tried the Rode microphone in my Mum's and brother's slightly older Macbook laptops and it was recognised by the computer. To set this I went into System **Preferences > Sound > Input**.

Although the laptop recognised the microphone, the input level only went up to about a three whereas it went up much higher without the microphone and would easily go up to about 12 bars. In the programs, the microphone was not recognised and there were only options to use the internal microphone of the laptop.

With the equipment I had available, I didn't have an option to use the microphone and record into Audacity and GarageBand like I had intended to do.

Instead, I plugged the Rode microphone into the camera and recorded my voice in a video recording. This still allowed me to assess the recording capabilities of the microphone. I could easily transfer this footage from the camera onto the laptop and then save the purely audio from it, while getting rid of the visuals. The movie opened in Quicktime player. To save purely audio: **File > Export > Audio Only**. There was not an option as to how is saved out and the final saved audio file ended up being an **'Apple MPEG-4 Audio'** file.



I found that the microphone was very sensitive and I could easily hear my breathing, even if I was not speaking directly into the mic. However the sound was very clear and loud. I tried the microphone on the 'flat' setting as well as the '80Hz' setting and I could not identify difference between the two. *The USB has the recordings when the microphone was on the 'flat' setting.* (Labelled as 'CameraBackgroundNoiseWithMic' and 'CameraNoBackgroundNoiseWithMic') Although my initial intention of using the microphone with the programs did not work out due to the equipment available to me, I feel using the Rode microphone with the 60D camera was a success. The sound recorded clearly and it was easily transferable onto my computer where I could save out the audio. I have now discovered an option to access different sounds where I may not have been able to take my laptop to record.

I was impressed with the noise that my laptop recorded with the internal microphone and it was much better than I expected. I will use this when recording my soundscape unless I need to go outside to record sounds such as footsteps on gravel or traffic. In these cases, I think the microphone attached to the camera will be more accessible and allow me to record more easily.

Background Noise.

For each program, with and without the microphone, I did a recording with background noise and one without. When I recorded with background noise using

the internal mic of the laptop, the background noise could not really be heard unless the recorded track it was amped up fully after recording. Even then it was not very noticeable, considering the volume of the CD I was playing. There was not much difference between the tracks with background noise and without, although I would still prefer an environment without background noise simply to ensure maximal quality. During recording both with and without background noise, I spoke about 30cm away from my computer. ('AudacityBackgroundNoiseNoMic', 'AudacityNoBackgroundNoiseNoMic', 'GarageBandBackgroundNoiseNoMic', 'GarageBandNoBackgroundNoiseNoMic')

When recording with background noise into the Rode microphone, attached to the 60D camera, all of the background noise could be heard. My voice was still easily heard ('CameraBackgroundNoiseWithMic'), but it was definitely competing with the background noise which was nearly as loud as my voice. The radio in the background was a distraction away from my voice which was supposed to be the main sound. Without background noise ('CameraNoBackgroundNoiseWithMic'), the quality of my voice was very good, however the microphone was very sensitive.

Ultimately, for my final product, I aim to record in settings without background noises so as to get a higher quality audio. When using the microphone I will need to ensure that any (if any) background noise is at an absolute minimum to avoid unwanted sounds.

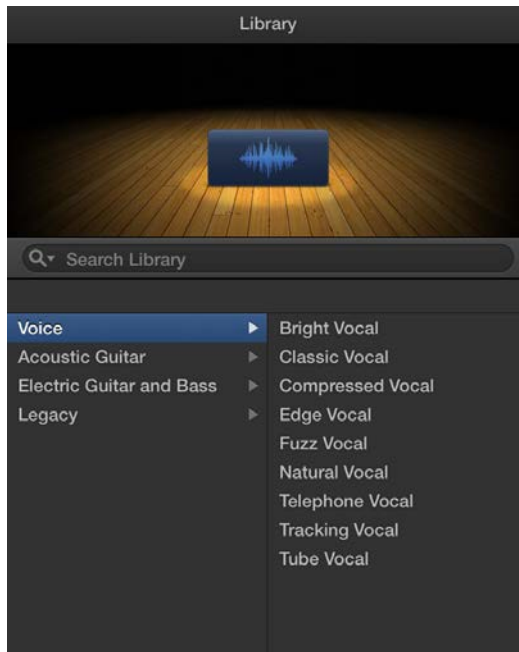
Altering Sounds

Which program allows me to easily manipulate sounds to achieve clarity or a variety of effects?

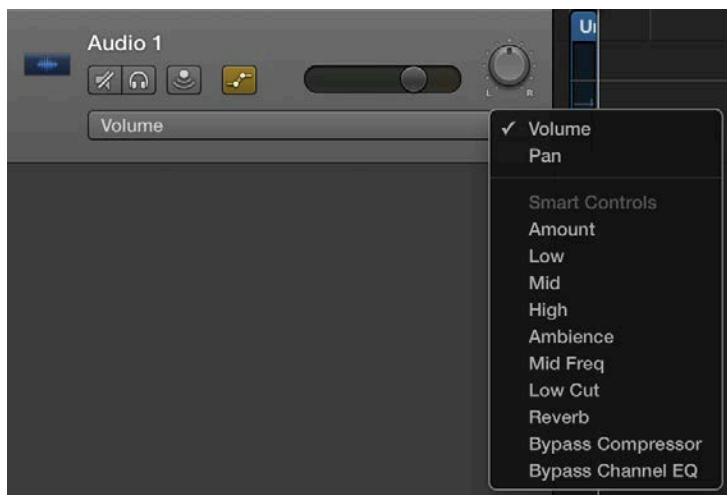
In terms of altering the sounds, I found Audacity easier to use. It had more options for effects and I found the feel and layout of it similar to Final Cut Pro which I am fairly comfortable with using. When I used GarageBand I found that there were less settings in one place and a smaller variety of settings to use.



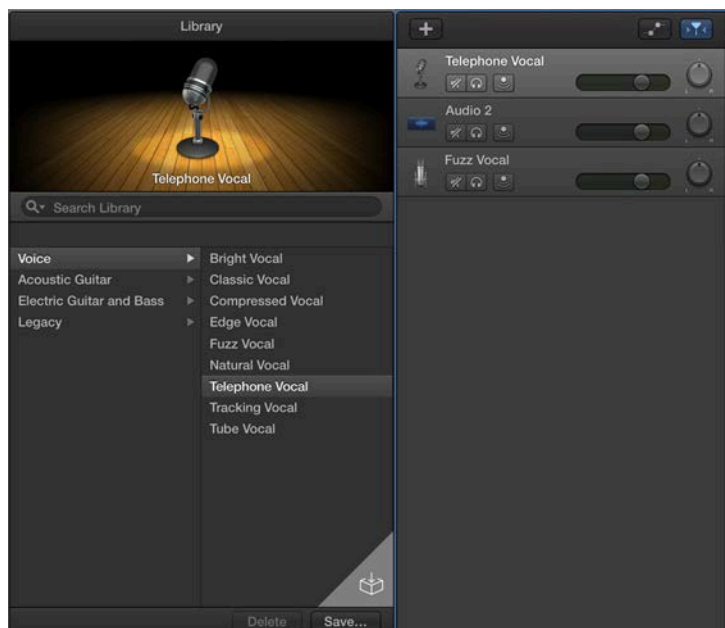
These were the effect options in Audacity.



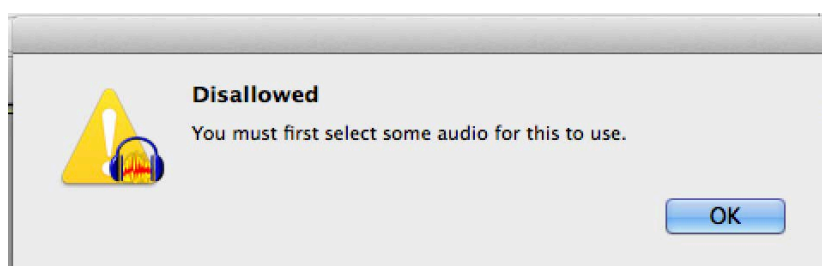
These were the effect options in Garageband.



There were a few more options but they were in a different location and less accessible.



In GarageBand I could record my natural voice and add effects to it or I could choose to record a voice with a particular effect. In Audacity however, I needed to record my original sound before putting an effect on it. As seen in this image, I could record my voice with a 'telephone' effect or a 'fuzz' effect or I could simply record my natural voice.



When I tried to select an effect before recording in Audacity, the program would not allow. All effects had to be applied after the sound was recorded.

The compressor effect in Garageband ('GaragebandBackgroundNoiseNoMicCompressedEffect' and 'GarageBandNoBackgroundNoiseCompressedEffect') made the sounds even clearer and I think that in terms of recording and altering voices, this effect would come in handy if the original sound was slightly fuzzy. There were a few effects which could create an interesting atmosphere such as the 'telephone' effect (making it sound like a voice on one end of a phone) ('GarageBandNoBackgroundNoiseNoMicTelephoneEffect') and the 'tube' effect (slight echo effect) and I may be able to use these briefly in my scape. In Audacity, I liked the Paulstretch effect ('AudacityNoBackgroundNoiseNoMicPaulstretchEffect'). It gave it a slightly eerie sound which would go well in the background. Unlike GarageBand, there were not as many 'effects' such as the 'telephone effect', rather there were more ways you could easily alter the tempo, pitch, stretch or echo to create similar 'effects' to the degree that you would like. On the USB I have used the 'change speed' and 'reverse' techniques to produce a new sound. ('AudacityNoBackgroundNoiseNoMicSpeedReverseEffect')

GarageBand did have several good effects, which I will consider using, however Audacity had more accessible effects (they were all in the same place) and the possibility to create more effects of varying degrees by using different techniques (pitch, tempo, stretch, etc)

IN SUMMARY

I preferred recording in Audacity was preferable to GarageBand. I could see things such as input volume while I was recording, whereas GarageBand was not as specific. They shared many similar components, however Audacity was more advanced, allowing me to know exactly what was being recorded. Audacity was also faster on my computer, not hiccupping at all, unlike GarageBand.

The internal microphone of the laptop was better than I expected and produced a high quality sound with and without background noise. The Rode mic would not work on my laptop, but I plugged it into the camera and captured sound that way before transferring that easily onto my laptop. The microphone captured good quality sound (slightly sensitive), however it picked up background noise very easily. It is a good alternative if I can't access a sound with my laptop.

Ultimately I will record in a setting with no background noises. If it is absolutely necessary however, they will need to be minimal.

When adding effects, Audacity had a larger range of more accessible effects. They had the possibility for me to choose the degree of the effect. The effects in GarageBand were good, but located in several different places so they were harder to find.

Overall, I found Audacity simpler and more accessible to use when recording and altering sounds.