Tertiary flute students' listening habits regarding live performances and commercial recordings: the influence of listening on students' attitudes towards study, practice, performance and further listening.

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Abstract

This thesis investigates the listening habits of tertiary flute students, with a particular focus on listening to commercial recordings and live performances, examining possible influences of these on advanced learning in tertiary level music performance. The question of whether there are differences in the influences on students' attitudes when listening to commercial recordings or live performances is examined as a preliminary overture for further exploration.

As part of expected study approaches, tertiary music students listen extensively to commercial recordings and attend live performances not only as listening entertainment, but to support their learning of repertoire; including stylistic and interpretative musical aspects, stagecraft, performance practices and standards. This study seeks to ascertain the direct influence that listening has on tertiary students own learning and progress in the development of musical performance skills. The aim of this research is to offer a preliminary study which examines the listening habits of tertiary flute students regarding commercial recordings and live performances and the influence of listening on students' attitudes towards study, practice and performance, exploring any differences in the impact of both listening contexts. Further, the study seeks to explore whether listening to edited commercial recordings has any impact on students' expectations and attitudes in the way that they listen to live performances.

The participants for this research were tertiary flute students from The University of Adelaide's Elder Conservatorium of Music and the Monash University Academy of Performing Arts, Melbourne. Surveys were administered to the research participants to coincide with the Australian Flute Festival in Adelaide, October 2009. The surveys examined three different listening contexts, edited recordings, live performances and live recordings and were based on specific performances of Australian artists from the Australian Flute Festival. The results of this study suggest that listening contributes to learning in various ways.

Student responses indicate that the focus of this thesis is of considerable interest in relation to studying music with serious intent in a tertiary environment. The researcher suggests that a greater awareness of what is sought in listening to music and the production standards of such music would, in general, generate more effective learning and broaden positive attitudes. As a preliminary overture this research starts a discussion on the habits and influences associated with listening to enhance learning, highlighting the need for, and potential of, further exploration along similar or extended lines of engagement, through which the function of recorded and live music as a learning tool is explored.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any other university or tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Chapter 1: Introduction

1.1 Background to the project

Tertiary music students have motives and methods for listening to commercial recordings[1] and live performances[2] that are distinctive to those of other listeners and listening consequently has different implications for the tertiary music student. This does not imply that tertiary music students listen in a superior way to others; however, listening to live performances and commercial recordings is an important aspect of tertiary music education. As part of expected study approaches, tertiary music students listen extensively to commercial recordings and attend live performances, not only as listening entertainment but to enhance learning. Listening is employed by tertiary music students to support their learning of repertoire, stylistic and musical interpretations, stagecraft, performance practices and musical standards, which is achieved through critical analysis and judgment based on individual expectations and interpretation. Commercial recordings and live performances provide for students very different listening contexts and pedagogical tools. Commercial recordings, such as Compact Discs (CD's), are influenced by the continual and rapid development of recording technology.

Even when listening to music for enjoyment, in-depth knowledge in a specialist field has the potential to influence students through critical thought and judgment, regardless of whether this was the intention for listening. The use of commercial recordings and live performances

[1] Commercial recordings are defined as recordings of music which have been released by a commercial recording company.
[2] Live performances are defined as live music performance events where the musicians perform in real time to an audience.

as pedagogical tools could feasibly impact students' study habits and attitudes towards practice, performance and further listening. Students may or may not be aware of the possible influences associated with listening to enhance learning. Consequently, how students listen could be of significant interest in tertiary music education. Knowledge of how different listening contexts[3] may impact on students' study habits, motivation and attitudes towards performance, may be of use in determining how listening opportunities can most effectively be used as pedagogical tools for performance training. A further issue raised by this study is whether frequent listening to edited recordings has any impact on the way that students listen to live performances. Because listening provides a useful learning tool for tertiary flute students, these students should be informed listeners,[4] aware of the context and production standards of the music to which they are listening. A greater awareness of the listening experience would, in principle, generate more effective learning and encourage positive attitudes.

1.2 Aim and research questions

The aim of this research is to offer a preliminary study which examines the listening habits of tertiary flute students regarding commercial recordings and live performances. By collecting a range of quantitative and qualitative data, this study examines the possible influences that different listening experiences and contexts have on tertiary flute students' attitudes towards

[3] Listening Contexts are defined as the context of the music being heard: a commercial recording; live performance; or live recording.
[4] Informed listening is defined as when listeners listen to commercial recordings and live performances fully aware of the context of their production standards, recognising them as different genres with different possible influences and listening to them as such.

learning repertoire, practice, performance and further listening using descriptive statistics to present a result of what occurred in the study. While this study does not aim to present statistically conclusive evidence, it does aim to use elements of quantitative method as an investigative tool to initiate a discussion on the relationship between listening and learning, within advanced music performance training. This study also highlights potential areas of significance and interest for further study within music education.

The following research questions form the basis of this investigation:

What are tertiary flute students' listening habits and to what extent do they listen to live performances and commercial recordings to assist with the learning of repertoire?

Are there any differences in tertiary flute students' assessments of musical performances, whether listening to commercial recordings or live performances?

How does listening to live performances and commercial recordings impact on tertiary flute students' attitudes towards learning repertoire, practicing and performing?

Does listening to commercial recordings have any impact on tertiary flute students' attitudes towards listening to live performances?

1.3 Context of the project

Literature has been published on the influence that the widespread availability of recordings has had on the way we listen to live music, changes in the way performers perform for recordings and the impact which commercial recordings have on today's expected performance standards. There is however, a paucity of literature that focuses specifically on tertiary music students, as a unique group of listeners, whose listening habits potentially have a direct influence on their own musical skills.

This current study confirms an identifiable lack of engagement with the issues involved in the use of recorded and live music as pedagogical tools in a tertiary environment. It is generally expected that tertiary music students listen extensively to both commercial recordings and attend live performances, not only as a form of listening entertainment but as tools for learning repertoire, different musical styles, stagecraft and expected performance standards. Consequently, this study examines possible impacts on students' performance attitudes as a result of engaging recorded and live music to enhance learning. This area of study should necessarily extend to include much broader questions concerning: the circumstances, context, need and impact of preferences for live or recorded music within advanced music education.

This current study offers a preliminary contribution to the literature on listening in education. As a contemporary study it aims specifically to determine the student's own perception of the impact which listening to live and recorded music has on his or her attitude towards study, practice, performance and further listening. Specifically, it focuses on current tertiary flute students as a generation who have grown up with widespread accessibility to the compact disc, digital music and pervasive reliance on technology; students today can access and listen

to music in every context of life, in ways that were not previously possible. Both commercial recordings and live performances provide useful learning tools in tertiary music education and how tertiary music students use and are impacted by listening to learn has potential implications in tertiary music education today.

Chapter 2: Literature Review

To establish a context in which to examine the influences of listening to enhance learning on the attitudes of the student listener towards study, practice and performance, the review of relevant literature for this current study focuses on three main areas. Firstly, the development of recorded sound, its invention and the continual development of technological devices and editing techniques; developments that have influenced listening by establishing a contrast between the two listening contexts of live and recorded music, shaping the way music is accessed, heard and consumed today. Secondly, how recorded sound provides listeners with a very different listening context removed from live performance and subsequently, how these different listening contexts influence listeners' attitudes towards listening and performance. Thirdly, the use of recordings as pedagogical tools to develop performance skills and the influence they have on tertiary music students' practice attitudes and learning motivation. By examining the contrasting listening contexts of commercial recordings and live performances and identifying the issues associated with listening, this current review intends to highlight the listening habits of tertiary flute students and the ways that listening is used to support learning.

2.1 Recorded sound

Extensive research has been completed on the history of recording technology, its invention and inception in late nineteenth century music making and continual development into the twenty-first century, describing the entirely different listening medium that recorded music presents by contrast to live performance. Authors such as Timothy Day (2000) examine in detail the history of recording techniques and the ways in which musical performance practice was originally altered to suit recording limitations. Day states that, for 'most of the history of classical music, right up to the 1980s with the introduction of digital recording and the CD, the techniques employed to record classical music have been moulded and shaped by technical short comings [and] by attempts to compensate' (Day 2000: 24); further, modern editing techniques continue to alter the reality of recorded performances. Like much of the literature available on the developments of recording technology, Day's study is a very fact-based historical perspective leading to a discussion on the influences that recordings have had on the performer and listener, asking questions such as, 'what have these modern techniques made possible and how have they shaped the way musicians perform?' (Day 2000: 23). Robert Philip (2004) also discusses in detail the developments of recording technology, exploring musical performance practices before recordings and the influence that recordings have had on instrumental playing styles, the performer and the conductor. Philip examines the illusions of perfection presented by commercial recordings, which developments in editing techniques have made possible and questions the authenticity of music created through editing.

Recording technology was first introduced to society with the invention of the phonograph in 1876, which was heralded as 'one of the technological milestones of the late nineteenth century' (Morton 2006: 1). Invented by Thomas Alva Edison (Day 2000: 1), the phonograph

possessed a recording funnel in which one was required to play or speak. The sound waves caused a diaphragm fixed on the opposite end of the funnel to vibrate and a needle which was attached to the diaphragm made indentations on paraffin soaked paper (later tin-foil) wrapped around a rotating cylinder (Morton 2006: 16). After the paper or foil was engraved, a handle was turned to rotate the cylinder and cause the needle to retrace its steps over the indentations, this made the diaphragm vibrate again and replay the original sounds (Goodall 2001: 182).

The invention of the phonograph has been described by Chanan (1995) as 'a revolution in human intercourse only to be paralleled by the invention of printing, or even of speech' (Chanan 1995: 3). When inventing the phonograph, music was not Edison's primary focus. As Chanan explains, Edison regarded the phonograph's predominant value was in capturing the spoken word and music recording was considered only as a secondary function. It was possible for a single voice to be more directly focused into the recording horn than an instrument could be, thus the phonograph was not very accurate in capturing music. Consequently, there was an early imperative to improve the quality of recorded sound and enhance the possibilities for recording music; which, according to Goodall, would never have had the same urgency if the function of the gramophone had only been to record speech (Goodall 2001: 178).

Accordingly, many variations of the phonograph were invented to improve its functionality and the quality of the recordings it produced. Edison's original phonograph could only playback recordings once, however, early improvement by Charles Tainter in the invention of the Bell-Tainter Graphophone made use of wax cylinders to record the indentations of the needle. These wax recordings were more robust and could be removed and played repeatedly (Goodall 2001: 187). Tainter also replaced the recording funnel with a larger recording horn to detect greater sound and thus capture music more accurately (Morton 2006: 16). The Emile

Berliner Gram-O-Phone further improved on early recording technology by using flat rubber discs instead of cylinders, these rubber discs allowed for reproducibility whereas previously, each recording had to be re-recorded by the musicians (Goodall 2001: 187). In 1887 Edison became reinterested in the possibilities of sound recording and set out to improve on the Bell-Tainter Graphophone. Edison's design duplicated the Bell-Tainter wax cylinder; however, he added several other patented improvements, such as a small electric motor. By late 1887 Edison had released the electronic phonograph (Morton 2006: 18) which 'improved dramatically the sound of records' (Symes 2004: 39). In the 1890s Berliner replaced their rubber discs with more durable, brittle plastic 'shellac' discs made of crushed Malaysian beetles. Berliner's company and associates went on to found most of the major record companies of the next half century (Goodall 2001: 187).

Despite continual improvements, the accuracy of early pre-electrical recordings before the 1920s was subject to extensive limitations. Musical elements, such as frequency, range and dynamics, were restricted as music was recorded mechanically, with no amplification, in small rooms, through recording horns (Philip 2004: 27). Consequently, due to the lack of amplification technology for recording purposes, orchestras were reduced in size to about thirty players so that every musician could be close enough to the recording horn (Goodall 2001: 191; Katz 2005: 82; Philip 2004: 27). This made it difficult to assess accurately the tone and balance of the musicians that were recorded and as a result, we are in no position to judge the quality of these early recorded orchestras. Further, because we cannot place many of these recordings in context, we do not know how the performances on these recordings may differ from those that occurred in the concert hall, the day before or the following year (Philip 2004: 231). Despite limitations in the recording process, a substantial number of orchestral recordings were made and professional musicians and conductors became sensitive to the limitations imposed by the technology, developing clever ways to get around them

(Hosokawa 1984: 177). The highest standard orchestral recordings, according to Philip, were the recordings that were a result of 'clever and sensitive use of technology … [and] the best arrangements of players in relation to the recording horns' (Philip 2004: 29), essentially, the ones for which standard performance practice had been altered to accommodate technology —a perfect example of 'the phonograph effect', a term created by Katz (1999: 3-4) that describes musical alterations made to suit the limitations of technology both in early and recent recordings and which will be discussed further in the chapter. As a result of the limitations that early technology imposed on recordings, the music produced in recording sessions was initially, quite different from the music produced in live concert hall performances; according to authors such as Katz (1999: 3-4) and Culshaw (Culshaw cited in Day 2000: 52) fundamental differences between live and recorded music through the use of recording technology remains evident in modern recordings.

Radio technology had been experimented with for many years and radio broadcasting was introduced to the general public in 1920 (Goodall 2001: 198), providing for listeners both audio recordings and broadcasts of live studio orchestras. The popularity of the radio gradually 'threatened to render [gramophone] recordings obsolete' (Katz 2005: 67) and impact on the sale of records (Laird 1999: 277). In the 1920s, in congruence with growth in the number of radio broadcasters, the quality of radio transmission improved greatly (Laird 1999: 277) and within a few years, most of the technical problems that had bedevilled early radio broadcasts had been resolved (Laird 1999: 285). In comparison to gramophone recordings, radio broadcasts possessed a wider range of frequencies, greater dynamic variation and also played complete works, so that listeners were no longer required to change the record every four minutes (Goodall 2001: 198). Indeed, the radio held further advantage over gramophone recordings during the depression as it brought to listeners a steady source of free music when few could afford it. Thus the phonograph industry suffered throughout the

depression and in 1932 the number of phonograph sales had plummeted to 40,000 from 987,000 in 1927' (Katz 2005: 68). To 'cut overheads, radio stations [had however] begun to make greater use of records' and radio broadcasts in the 1930s turned more to the use of recordings than live studio orchestras, which had 'previously [been] maintained by the radio stations' (Laird 1999: 286-7).

According to Katz (2005) 'by 1930, attitudes toward music and the phonograph had changed considerably' (Katz 2005: 67) and after 1932 the topic of gramophone[5] music had virtually disappeared from music journals. For the most part, the decline of the gramophone was attributed to the development of new technologies. 'By the mid-1950s increasing numbers of Americans were participating in what the industry called 'out of home listening' (Douglas 2004: 221) and the popularity of the radio meant that composers began writing music specifically for 'radio broadcast. Although radio did not offer the same possibilities as recording it did draw attention away from the latter' (Katz 2005: 111).

Until 1912, cylinder-playback machines had allowed listeners to make recordings of themselves and 'home recording was widely popular' (Katz 2005: 69); the demise of domestic recordings 'came with the standardization of the disc-playing machine, which did not easily allow home recording[s]' to be made (Katz 2005: 69). Consequently, the invention of tape recorders created unanticipated consumer demand for blank tapes and a renewal of interest in personal home recordings occurred. The first audio cassette was released in 1963 and offered listeners a convenient, compact and durable, if low-fi, alternative to records (Day 2000: 20). 'The use of tape recorders in recording studios altered radically the way recordings were produced' (Symes 2004: 63), as magnetic tape brought with it the possibility of editing

[5] The Gramophone and phonograph refer to the different models of very similar listening devices patented by Bell-Tainter and Edison and after the 1890s are interchanged in the literature.

(Day 2000: 27; Katz 2005: 101; Nisbett 1970: 438; Philip 2004: 27). 'A battery of editorial techniques, such as multiple takes, patching, over dubbing and splicing [meant] producers and engineers could produce more or less faultless performances of musical works' (Symes 2004: 63), 'permitting performance errors to be eliminated' (Symes 2004: 42). 'Different 'takes' of the same piece could now be sliced up and stuck together' (Goodall 2001: 202) and recorded performances could even be 'multi-layered, built up by combining recordings made at different times in different places' (Day 2000: 26). In Goodall's opinion, 'ever since the ability to cut tape was developed classical music has become obsessed with the possibility of editing' (Goodall 2001: 202). The editorial possibilities afforded by magnetic tape allowed engineers and producers to defy 'the temporal and spatial parameters that had limited musical performance to the circumstances of its provenance;' making a record became more like making a film which is not filmed sequentially or continually (Symes 2004: 56, 69-70). Further development of cassette playing devices occurred in 1979 when the Sony Corporation marketed the Walkman, a portable listening device which enabled listeners to listen to recorded cassette music or radio broadcasts through headphones wherever they might be. Other companies soon followed suit (Williams 2004: 1) and the term "Walkman" became used for any portable listening cassette player.

The invention of the compact disc (CD) has been labelled as the greatest revolution in recording since Edison's, Bell Tainter's and Berliner's early inventions (Peter K. Burkowitz in R. E. Miller 1994: 185). Described by Roger Lagadec, a Swiss engineer whose research was instrumental in the development of the CD, as 'the biggest jump in technology that the audio industry had ever seen' (Roger Lagadec cited in R. E. Miller 1994: 191), the CD began a new era of recorded digital sound. Widely available to listeners, easy to copy and with clearer audio, the CD, according to Miller, took over the world and 'five years after entering the market … was the fastest growing home entertainment product in history' (R. E. Miller

1994: 221), ‘overtaking records to become the principal recording format’ (Nathan 1999: 145). In 1983, 800,000 CDs were distributed to retailers, a number which grew astoundingly to 333 million in 1991 as consumers gradually replaced their vinyl records and cassettes with CDs (R. E. Miller 1994: 221). Much like the principle of making indentations on a wax cylinder, sound is copied onto a CD by burning microscopic pits onto its surface (Alkin 1988: 213; R. E. Miller 1994: 191); however, by comparison with the phonograph, the CD is ‘a model of precision and complexity’ (R. E. Miller 1994: 191). To achieve playback the CD spins as a laser beam which is reflected through glass lenses moves outwards over the disc and detects pits in the surface of the CD (Alkin 1988: 213; R. E. Miller 1994: 191). Both digital and analogue recordings create the same outcome by decoding voltages into a current that causes speakers to vibrate and ‘recreate the [continuous] soundwaves captured by the recording’ (R. E. Miller 1994: 192). The differentiation between digital and analogue recording occurs however, in that all digital audio recordings, such as CDs, are recorded as amplitude not frequency (R. E. Miller 1994: 192). Digital systems can therefore subdivide sound into the smallest sections possible, called bits, which are described by binary codes. These binary codes possess enormous power as, proved by engineer and mathematician Claude Shannon, they allow information in binary form to be ‘transmitted over a carrying channel and reconstructed at the other end with very little chance of error’ (P. D. Miller 2008: 193).

Eventually, CD sales declined, which was attributed to further developments in digital technology, such as ‘Napster, MP3s and CD burners (R. E. Miller 1994: 259). Motion Picture Experts Group 1, Layer 3 (MP3s) were invented in the 1990s, by The Motion Pictures Experts Group and were originally invented, as Edison’s phonograph was, as a dictation device in the world of business. The revolution of MP3 files lies in their capacity to compress huge video and audio data files into sizes manageable for sending and storing on computers, ‘about a

twelfth [of the size] they would occupy on compact disks' (Katz 2005: 25). The internet was also conceived … in 1900 as an undiscriminating conduit for information' (Kot 2009: 25) and Napster, developed in 1999 by two college students, enabled the almost instantaneous transfer of digital data, such as MP3 files, via linked users on internet networks. Instantaneous data transferral and music downloading via the internet possessed huge appeal for listeners and enabled unprecedented music sharing because of its accessible, easy and free use (Katz 2005: 162); on the internet 'information exists to be absorbed, processed and appropriated by all' (Alderman 2001: 86).

Invented by the Apple Company in 2001, the iPod was the world's first portable MP3 player. The iPod enabled listeners to carry with them MP3 files which could be listened to in any situation anywhere, improving and expanding the possibilities for intimate listener technology (Bull 2007: 72). Earlier portable listening devices had required the playing of cassette tapes or CDs, however, the highly compact iPod expanded the listening options available for the user by storing huge amounts of their preferred music as MP3 audio files (Bull 2007: 127). The Apple iPod, has been described as the first cultural icon 'of the twenty-first century, represent[ing] a perfect marriage between the mobility, aesthetics and functionality, of sound and touch [and enabling users to possess their] auditory world in the palm of their hand;' MP3 files and iPods represent a prominent mode of listening today (Munkacsi 2006: 82). Katz describes the possibilities of accessing music online as remarkable when, not long ago, carrying the equivalent of an entire record collection in a device the size of a deck of cards and sending music 1000's of miles away in a single second 'might have seemed as distant a possibility as flying cars' (Katz 2005: 159). However, in many parts of the world music has become highly accessible and 'an entire generation of listeners will come of age not knowing a world without such [listening] possibilities' (Katz 2005: 159).

In the record industry editing techniques are widely used and editing is a standard procedure in the production of digital recordings. Recorded live performances have the potential to be touched up and studio recordings provide editing technicians with the material from which to create a singular performance. However, 'very rarely do performers or record companies divulge whether particular discs [are] edited and to what extent any editing occur[s]' (Day 2000: 27). This current study focuses on the principle of edited recordings, the use of recordings to assist learning and the implications of editing techniques which potentially do not convey reality. 'As there are always unavoidable 'hazards when making live recordings' even live recordings, according to Symes, are sometimes subjected to editing, such as dubbing; Symes cites several famous examples of live performances in which mistakes have been edited out (Symes 2004: 70).

The time spent recording and number of takes recorded by a musician, determines the quantity of musical material available to the editing technician when deciding what to include on the final recording. A greater number of takes provides the technician with greater choice in the selection of material used and influences the amount of editing that can later occur. Czech conductor Jindrich Rohan openly explained in 1997 that in the recording studio 'you can repeat a thing until it is absolutely perfect' (Rohan cited in Harvith and Harvith 1987: 179). Rohan stated that he had never recorded a symphonic movement without stopping and that while recording a 'symphony he would expect 80, 100, or even 120 stops and retakes' (Day 2000: 27) from which material for the final recording could then be chosen.

According to Day, the length of time taken to record differs greatly between recordings. Day describes how one professional recording of a forty minute symphony might produce recorded material with 'ratio of recording time to master-tape material [of] 2:1' (Day 2000: 28). However, another orchestra recording of the same work could require a longer recording

session so that the ratio of recording-time to master tape material could be up to eight times longer (Day 2000: 28). Consequently, the record producer and editing engineer would have more than eight times the amount of music to choose from than they actually required. Obviously this gives greater scope for manipulating the recording by editing together the highest quality sections in minute detail. Using the multiple retakes, digital recordings can be 'edited by dubbing from one matching to another,' requiring a sophisticated electronic synchronising system' (Alkin 1988: 182). After studio recording sessions, the CD producer usually works in conjunction with an editing engineer and notes from the performer to assist with editing the recording.

The literature available on the recording process and editing techniques used in the production of commercial recordings, Hunt and Kirk (1999), Alkin (Alkin 1988: 182), Rumsey (2009), Izhaki (2008) and Clark (2008), focuses largely on the technicalities of recording programs and editing equipment specifications. For example, Hunt and Kirk (1999) discuss in very scientific and mathematical terms various techniques of the editing process. Simple descriptions of some of these techniques include, 'equalisation [which] consists of the application of a variety of different kinds of filters to a sound in order to manipulate the timbre, or to emphasise (or deemphasise) different parts of the sound spectrum.' Flanging and phasing are techniques which allow audio to be 'mixed with a time delayed version of itself' (Hunt and Kirk 1999: 165-6). 'Chorusing attempts to stimulate the effect of many voices in a sound ensemble by mixing in the dry sound with versions of itself which are slightly delayed' (Hunt and Kirk 1999: 164). Pitch shifting, harmoniser and time graduation techniques all allow increases and decreases in pitch levels (Hunt and Kirk 1999: 164-5). Finally, reverberation allows 'the reverberation present in the natural sound [to be] modified and often augmented' (Hunt and Kirk 1999: 166).

Rumsey describes the ease of using digital recording technology and how the majority of digital audio recording and editing now occurs on computer-based workstations. Due to this and the ever increasing availability and cheapness of computer mass storage media, editing can be completed on the average desktop computer with ease (Rumsey 2009: 5). Rumsey lists in much technical detail different elements of digital editing; a simplified example of one editing technique being the digital equivalent of the magnetic tape cut, the butt-join. Indicating the ease of extensive audio editing, Rumsey describes the commonly used butt-join as a 'very simple [editing technique] because it involves [the] straightforward switching from the replay of one sound segment to another,' allowing two sequences to be joined (Rumsey 2009: 22). Butt-joins demonstrate the accuracy of the minute changes that can be applied to recordings in the editing process (Alkin 1988: 182) as butt-joining allows sections from different takes to be combined with the possibility for the accuracy of these edits to 'be as fine as a number of tens of microseconds' (Rumsey 2009: 22). The digital recording medium and sound quality 'suffers no degradation in the dubbing process' of the butt-join (Alkin 1988: 182). Further, there are a number of different crossfades that can be used to hide any audible irregularities caused by the discontinuity of the waveform, which 'coupled with the ability to preview edits and fine-tune their locations, has made it possible to put edits in places previously considered impossible' (Rumsey 2009: 23).

Editorial techniques, according to Symes, 'have ensured that recordings of classical music, in terms of their accuracy and faithfulness to the original score, are always potentially finer than anything that is achievable in the concert hall' (Symes 2004: 71). Prominent literature speaks of recorded music by contrast to live performance, the production of 'perfect' performances and the specialist methods of editing techniques required to achieve this. However, there appears to be a paucity of literature that indicates to what degree these techniques are used to manipulate recorded material in order to create the 'perfect' performance. The concept of a

perfect performance is arbitrary as technically, no performance can be perfect as for reasons of available time and degree of technical fidelity; there must be a termination point in the number of edits performed in the creation of a 'perfect' recording. Consequently, there is always a theoretical potential for further editing improvement; the listener cannot know the scope of editing performed on a continuum of potential editing of the recorded music that is heard. This current study addresses the apparent ease with which the editing of recorded music into 'perfect' performances is possible, which in turn, alters the performance that is actually heard. I will examine how this may affect listening and influence learning, particularly with regards to the emulation of aspects of recordings in a tertiary music environment.

2.2 The Influences of recordings on listening and performing

The listening experiences available for audiences today are very different to those once only accessible in the concert hall. In the late nineteenth century, music could only be heard as live performances and audiences had to seek out music performance or make it for themselves (Gracyk 1997: 139-150). Music-making occurred not simply as an aural experience, as it has largely become today, but 'also [as] a matter of physical presence, social interaction, and direct communication between the musicians and [their] audience' (Philip 2004: 5). The development of recording technology has had a profound impact on classical music in the twentieth century. According to Goodall (2001), recordings 'unleashed on the twentieth century a massive amount of music in a multitude of forms, [and] gave music wings to cross the planet' (Goodall 2001: 178). Before their widespread and extensive assimilation into

western culture, recordings were only experienced by a small minority. Eric Clarke (2007) describes how 'early encounters with the gramophone were rather like a live concert' (Clarke 2007: 63); the gramophone was presented at the front of a room like an instrument, while audiences assembled around to listen as they would at any performance (Clarke 2007: 63). Recordings are now so accessible that they have become the main provider of music in people's lives (Leppert and McClary 1989: 175), while live performances, for many, provide a secondary listening activity (Philip 2004: 14). In Philip's opinion, music listening before recordings was far more intent and live concert going far more frequent and generally appreciated; 'each [live] performance was unique. Once it had started, it continued inexorably through to the end, with or without mistakes' and was never intended to be a perfect rendering, but as entertainment and narrative for the audience (Philip 2004: 12). Gracyk explains how mistakes in live performance are momentary, creating only 'temporary embarrassment' which is known to only those present and able to be forgotten, not preserved as it would be on a recording (Gracyk 1997: 148).

The professionalization of music-making through the growth of recordings, has largely divided society into performer or listener (Philip 2004: 8). As recordings and radio became an accessible and integral part of society, listening was no longer restricted to live experiences such as domestic, community or concert music making, which had been central to live music performance experiences in the period between eighteenth and early twentieth century (Day 2000: 200-204). Amateur performance was once much more prominent and widely spread in Western countries, being for many, the primary source of domestic music listening (Philip 2004: 4).[6] Although most schools offer choirs and band or orchestral programs, rehearsal or private practice time is a means to an end and does not provide regular domestic listening.

[6] This is not to say that amateur music making does not occur today, either through jam sessions, impromptu domestic performances or singing around the piano, but that it has declined greatly in its domestic presence.

During the eighteenth century, major composers supplied music for both professional and amateur performers (Philip 2004: 7). After the early nineteenth century however, 'few major composers were … paying any attention to the mass of amateur music lovers' (Philip 2004: 8) and few composers took any interest in music education; Bartok, Kodály and Britten were among the exceptions (Philip 2004: 7). Recordings allow listeners to experience music beyond the concert hall, essentially removing, in Hosokawa's belief, the importance of nineteenth century social aspects of amateur music-making and live performances, the interaction of musicians with each other and also with their listeners (Hosokawa 1984: 177).

Aspects of music such as atmospheric silences, theatrical *ritardandos* and pauses, which in live performance are dramatic and impact greatly on the listeners' experience, are often altered and lost, according to Day, for the sake of recordings (Day 2000: 54). Without the visual aspect of the performer and audience interaction, the phenomenon of silence within a recording cannot be as intently still and captivating as it is in the concert hall. Recordings in the context of their production are generally considered to provide very different listening mediums to live performances. There are varying opinions presented in literature on what differences these two listening contexts possess—if elements of live performance are lost in the recording or editing process, or whether live recordings provide an accurate representation of live performance. A number of musicians and authors believe that there are no real differences between live performances and live or edited recordings; others feel that the singularity and audience interaction of a live performance creates an aura that cannot be captured on a recording, even one that is live and unedited.

Although stating that recordings are generally considered to be inferior in essence and authenticity to the live-performance itself, Christy Uidhir (2007) instead thinks of unedited recordings and live performances 'as twins' (Uidhir 2007: 298). Uidhir refers specifically to

'undoctored [unedited] recordings of live performance,' of which she believes there are few (Uidhir 2007: 299) and further states that there is 'no necessary aesthetic difference' between a live performance and the recording of that same performance (Uidhir 2007: 298-312). Agreeing with Uidhir, Aron Edidin argues that live performances may be singular momentary events in time, but that such singularity does not create a fundamental aesthetic difference between a live performance and a recording (Edidin 1999: 24-39). In essence, Edidin believes that there is nothing present or that can be offered in a live performance, which cannot be experienced or heard on a subsequent recording of that performance. A contrasting opinion was held by John Culshaw, a pioneering record producer for Decca, who was unequivocal in asserting that the performance element created by communication with a live audience is 'an entirely different exercise from communication through a microphone to a domestic audience' (Culshaw cited in Day 2000: 52). Culshaw felt that the aura of live performances created by an audience 'swept away in the excitement of the moment' allowed inaccuracies, revealed later in close examination of the live recording, to have 'passed unnoticed in the hall' (Culshaw cited in Day 2000: 55). Consequently, Culshaw believed that if live recordings were made, they should only be preserved as historical documents; he preferred the perfection of edited recordings to live recordings, which he believed to be of inferior quality.

As a critic of culture, Walter Benjamin (1936) wrote on the loss of aura in art through mechanical reproduction. Although referring specifically to photograph and film, Benjamin's work is applicable to the mechanical production of music as his contention echoes the opinions and comments of various professional musicians on the loss of aura in the recording process. Benjamin suggests that the mechanical reproduction of art is responsible for destroying the uniqueness, authenticity and aura of that art. The presence of the original, according to Benjamin, is 'the prerequisite to the concept of authenticity' and 'even the most perfect reproduction of a work of art is lacking in one element—its presence in time and space

as a unique existence at the place where it happens to be' (Benjamin 1936: 3) Applied to music, the original artwork described by Benjamin can be seen as the singular event of a live performance and thus any reproduction of live performance via recording would, by Benjamin's theory, be unauthentic. Theodore Gracyk (1997) states that there is a crucial aesthetic difference between live performances and recordings, however in contrast to Benjamin's opinion of the superiority held by the original, Gracyk views live performances as not necessarily being superior to live recordings (Gracyk 1997: 139-150).

Many musicians also contend that the character of a performance is lost through editing. Of these, cellist Gregor Piatigorsky declared that he did not like perfection of recordings created by splices, indicating a preference for the spirit of the performance and performer over perfection (Steven Pruslin cited in Day 2000: 26). Neville Cardus, an English music critic, believed that musicians who did not communicate a strong personality or presence on stage 'did not seem to lose very much [character] in their recordings' (Day 2000:54). Cardus felt that the art of great performers who possessed 'beautiful and rare' spirits, such as pianist Artur Schnabel and contralto Kathleen Ferrier, eluded capture by the microphone and Cardus stated that 'the effect they made in the concert hall vanished with them forever' (Cardus cited in Day 2000: 55). Day further quotes the composer and conductor Pierre Boulez whose comments in 1988 were, he believed, an accurate reflection of the 'opinions widely expressed towards the end of the century that [the] technical sophistication and … analytical perfection of edited recordings [created] a deadening effect on musical expression' (Day 2000: 55).

Although numerous musicians record, some musicians believed so strongly that essential aspects of performance were lost through recording that they refused outright to record. Much like Benjamin, Romanian pianist and conductor Sergiu Celibidache, believed the 'value of a musical performance lay in its uniqueness … aris[ing] from the time and location of the

performance, and the particular audience with whom the music [was] experienced.' Recording, Celibidache said, 'killed spontaneity in performance and encourage[ed] a dangerous passivity in listeners,' Celibidache expressed the desire that all musical experiences should be participatory (Day 2000: 56; Symes 2004: 42). Slovenian violinist Miha Pogacnik, who also did not make recordings, allowing only a singular radio transmission of live concerts but not their subsequent release as commercial discs (Day 2000: 57). Pogacnik's objection to recording evidentially lay in the elimination of the singularity of the event that a performance should be and the loss of aura and character through editing, rather than the loss of communication with the audience which is absent in the context of a radio broadcast.

Benjamin (1936) also believed that the inevitable decline of aura in the development of mechanical reproduction was, in a number of respects, a good thing. The benefit of mechanical reproduction in his opinion lies in breaking down the mystique that is created by aura and tradition, 'the technique of reproduction detaches the reproduced object from the domain of tradition' (Benjamin 1936: 3). Benjamin states that 'for the first time in world history, mechanical reproduction emancipate[d] the work of art from its parasitical dependence on ritual' (Benjamin 1936: 5). By making many reproductions, recording 'substitutes a plurality of copies for a unique existence' and permits the reproduction to meet the beholder or listener in their own particular situation (Benjamin 1936: 3). To an even greater degree, the work of art reproduced becomes a work of art designed for reproducibility and the methods of its creation are altered to suit its reproducibility (Benjamin 1936)—a different description of the Katz phonograph effect (Katz 2005: 3-4). If the mystique of a work of art is broken down, then a work of art is torn from the 'fabric of tradition' (Benjamin 1936: 3) from which it was a part, and it loses its false importance. Applied to live performance, if music is torn from the context of the concert hall, it subsequently loses the elements that are created by the spatial parameters of the performance, such as the performer

and audience interaction, the appearance of the performers and the emotion generated by the event. Instead, the performance is heard purely for its musical value rather than for the false importance of the event surrounding it. In this statement, the assumption is made by Benjamin that the importance of the event is in fact false. Benjamin's opinions do not acknowledge or give any worth to the idea that everyone who experiences art is unique and able to discern what is valuable in their experience of it.

Removing further the art of listening from the spatial parameters of the concert hall and increasing the possibilities and ease of listening opportunities, the invention of the Walkman and eventually the MP3 player provided the ultimate device for personal listening. The Walkman was the first technology which allowed listening to become completely personal and private, changing 'the daily experiences of millions of people [and] enabling them to listen to music wherever and whenever they choose' (Williams 2004: 1), often providing for listeners a regular companion in the activities of their day (Bull 2007: 137). Bull (2000) describes how a personal listening device 'reorientates and re-spatializes the users' experience … in solipsistic and aesthetic terms' (Bull 2000: 31). In Hosokawa's (1984) view portable music 'has no meaningless context; [but] at the same time, paradoxically, no context is strictly appropriate for it. Every context (or no context) can be justified, appropriated and legitimated by its singularity and autonomy,' portable music 'contextualises every situation which seemingly does not cohere with it' (Hosokawa 1984: 171). Recordings and mobile listening allow the further removal of music from its live performance role, by enabling it to accompany all aspects of everyday life as essentially background entertainment, which is listened to, often subconsciously.

Technological developments have influenced the reality of recordings through the extensive possibilities of editing. It is the opinion of Gracyk that through studio recordings, audiences

experience not music but sonic art that is produced not performed (Gracyk 1997: 148). Prior to the possibilities of editing, musicians had to record continuously greater amounts of music (Day 2000). Similarly to views held by Goodall, Philip (2004) describes however, that today with extremely sophisticated digital editing techniques, musicians are only required to play each note perfectly once for recording purposes and 'the illusion that they have done so continuously is often created by (subsequent) editing' (Goodall 2001: 203; Philip 2004: 43), creating artificially high recording standards that could not be matched in the concert hall (Goodall 2001: 203). The extensive possibilities presented by computerised editing techniques, according to Philip, mean that today's recordings have to be 'virtually perfect;' potentially setting ever increasing and 'unprecedentedly high expectations' of performance standard for both the audience and performer (Philip 2004: 43). Gracyk states that sound editing 'has given birth to a new sort of virtuosity, that of production […] the sculpting of sound for musical effect, without regard for its realization before an audience' (Gracyk 1997: 148).The improved standard of recordings through editing technology, according to Philip, has raised the standard of musicians today as they strive to reach the 'perfection' they hear on recordings (Philip 2004: 13). This is not to say that today's recording artists are not talented and capable performers. However, Philip believes that editing enables the production of recorded music to a level of quality that many performers could not necessarily produce in a live performance and that the widespread presence of the near perfect recording has allowed many listeners to forget this.

Comparatively, a 'now or never' attitude is reflected in live performance (Philip 2004: 12) as 'in the concert hall there is only one chance, nothing can be redone or undone and [both] musicians and audiences have to take what comes and make the most of it' (Philip 2004: 231). Unfortunately, the 'artificially high standard' of recordings, according to Goodall (2001: 203), is also a major contributor to the growing trend of dissatisfaction with the imperfection

of live and amateur performance; which cannot meet the expectations of the 'perfect performance' created for recordings to which twenty-first century audiences have become so accustomed (Philip 2004: 13). Owing to the continued development of editing techniques in the recording process, the attitudes of listeners have, according to Day (2000), been further altered concerning musical accuracy in live performances. For example, Day describes how musical imperfections, such as mistakes and bad tuning, have become less and less acceptable, particularly on finished recordings; a phenomenon potentially removes a degree of enjoyment from listeners live music experiences. That is not to say that all performers prefer editing. Violinist Anne Sophie Mutter would rather 'keep the string that doesn't speak or other minor imperfections that lose the spirit [of performance when edited, because] reality isn't perfect' (Day 2000: 27). Philip views that today's musicians have become a generation of highly self critical musicians (Philip 2004: 25). Philip believes, as does Goodall, that because of the possibilities presented by and the wide acceptance of editing techniques, musicians are tempted as never before to improve the inaccuracies of their playing (Goodall 2001: 203; Philip 2004: 25).

The possibilities of editing and the high standard of near perfect recordings described by authors such as Philip (2004) and Day (2000), are of significance to tertiary music students who use recordings to enhance learning. Philip describes how since their beginnings, illusion has always been the point of recordings and listeners cannot accept any recording, early or recent, as a representation of reality (Philip 2004: 26). The truthfulness of recordings as documents depends entirely on the context of their production—where and how they were recorded, the limitations present, the approaches used and the conditions under which the recordings were made. Listening to 'artificially high standard recordings' (Goodall 2001: 203) created through editing techniques has implications for all listeners, but particularly for tertiary music students who listen to emulate what they hear; near perfect recordings

potentially provide students with an unrealistic perception of acceptable performance standards. Tertiary music students wishing to emulate what they hear in recordings need to be made aware of the context of their production and the reality of what they are seeking to imitate. This opinion is shared by Katz in his study of contemporary violin portamento and he states that, 'we must exercise caution when using recordings as documents of performance practice' (Katz 1999: 6). Katz describes what he calls 'the phonograph effect [which is] any change in musical behaviour or activity that is in some way a response to the distinctive characteristics of sound recording technology' (Katz 2010: 6). A contemporary performer who changed fundamentally his playing and performance style, in response to developments in recording, was Canadian pianist Glenn Gould. Renouncing concert performances in favour of recordings, Glenn Gould retired from the concert hall as he believed that there was no longer any need for him to perform and that his future lay in the recording studio (Gracyk 1997: 145; Symes 2004: 55-56). Gould simply believed that recordings were superior to live performances, mocking those who flaunted the *live-ness* of their recordings and instead praised the 'splices and other mechanical adventures that recordings made possible' (R. E. Miller 1994: 12). Gould believed that there was no longer any need for live performance, because recordings allowed musicians to develop playing techniques specifically to gain certain effects on recordings, which are superior to and not possible in live performances (R. E. Miller 1994: 22-23).

Gracyk raises the following question about edited recordings: 'is one listening to a virtuoso […] performance […] or merely a marvel of engineering,' since the artist's performance is constructed through extensive editing?' (Gracyk 1997: 140). In this statement, Gracyk gives no consideration to that fact that recordings can present a performance that is within a performer's real capabilities, or that the musician's instrument is a marvel of engineering, and that musical ability is also a marvel of years of intricate mental and physical self-engineering.

In some cases however, recorded performances are enhanced by and become a product of the marvel of modern engineering.

2.3 Developing performance skills

As Clarke describes, ‘recordings allow a listener to repeat a gratifying experience, to hear again music played in exactly the same way’ (Clarke 2007: 51). The repeatability of a recording is the main tangible aspect that separates recordings from live performances. Repetitive listening to a recording allows the listener to develop a familiarity with the music and specific interpretation that is not possible when listening to a live performance; such familiarisation with specific recorded performances can only influence both the way musicians perform and audiences listen. In the eighteenth and nineteenth centuries, performances of works by classical and romantic masters were new music and concert hall performances were often the first time that audiences heard them. Before the age of recording, audiences may have only heard a piece of orchestral music once or twice a decade (Goodall 2001: 178). Philip (2004) illustrates how the availability of commercial recordings ensures that an audience may already be intimately familiar with works before they hear them in live performance. Without the comparison of near perfect edited recordings and numerous past hearings, nineteenth century audiences did not possess the same potentially unrealistic expectations of live performance standards that audiences in the later twentieth century are potentially influenced by. The repeatability of recordings not only has the potential to influence listeners’ expectations of live performance but also makes recordings readily available for use in learning.

Live performances are singular events, whereas recordings are repeatable, making them highly useful pedagogical tools. Through recordings, performers also have the potential to be intimately familiar with works, possessing strong musical opinions of them, even before they are required to play them. Described by Hallam and Barry (2002), as part of expected study approaches when learning repertoire and developing musical and stylistic interpretations, tertiary music students are widely encouraged to use an analytic approach which is based on 'extensive listening to music, comparison of alternate interpretations, and analysis of the structure of the music'(Barry and Hallam 2002). Consequently, the convenience and repeatability of recordings makes them an incomparable learning tool in their provision of endless listening possibilities, to any style of repertoire and performer imaginable.

In his description of the functions of portable listening, a classification system identified by Bull (Bull 2000: 186-190), Williams adds the function, 'learning' which typically consists of music students who as listeners, listen to learn the form and structure of a work and is most relevant to this current study. When listening to learn, students 'attempt to make aural sense of theoretical information regarding the music, compare interpretations or stylistic variations and generally to familiarise themselves with the music' (Williams 2004: 31). Williams' study is one of the few that focuses specifically on tertiary students who listen to support learning and the learning listener and can be applied to students listening methods more broadly beyond the use of the Walkman. The other listening categories described by Bull (Bull 2000: 186-190) and Williams (Williams 2004: 31-33), identify how listening to portable music does not necessarily occur exclusively and can be used to provide a further dimension to various other aspects of everyday life. Although these listening functions are associated with portable music they are also, to an extent, applicable to the listening of any recorded music listened to in the listeners own personal space.

Williams' category of 'learning' is directly related to this current study on the listening habits of tertiary flute students. Williams highlights the prominent issues involved in listening to recordings in order to learn, detailing the opinions of eminent musicians and demonstrating the impact that portable listening technology has on the student as a listener (Williams 2004: 12). In many cases, as Williams explains, the resulting knowledge gained through listening to learn is applied to the student listener's studies and subsequent performance of repertoire. It is the possible implications associated with listening to learn and the emulation of recordings, described by authors such as Philip (2004), Day (2000) and Goodall (2001) as perfect performances, which inform the direction of this study. Williams describes how the convenience of portable music allows student listeners to listen to study related music whenever they have a moment, rather than having to make a special effort to do so. Due to the portability of twentieth century music listening, students are able to listen to recordings far more frequently than they would have in previous generations. Williams describes that listening to learn allows students to become familiar with, to understand and to imitate what they hear, with the intention of improving personal playing (Williams 2004: 31).

Various musicians' opinions on the issues associated with listening to learn, provided by Williams, further highlight the influences that recordings may have on student listeners (Williams 2004: 46). Bela Bartok (1976), John Philip Sousa (1906), Igor Stravinsky (1962) and Vaughan Williams (1963) have expressed opinions regarding the impact of recorded music on music education and training. Sousa was wary of the gramophone, vehemently noting the negative aspects involved in portable listening and the impact it would have on both music education and training (Katz 2005: 68). Sousa also feared that using recordings to learn would eliminate traditional music teaching and the experiences of hearing live music and playing music with others. About recorded music, Sousa stressed that deterioration will occur because listening too much will substitute for the study of the practice of music in live

performance (Williams 2004: 46). Bartok saw potential benefits for recorded music in education, recognising the role of recordings in teaching and learning; he stated, 'the best gramophone recordings can never replace the original performance and the role of the gramophone is more important from the pedagogic and scientific viewpoint' (Bartok cited in Williams 2004: 47). Finally, Igor Stravinsky's opinion on recorded music was made, not so much from an aesthetic point of view but, in response to his observations of the changes in the process of hearing music. For Stravinsky, a downside to the accessibility of recorded music was the lack of necessary effort to listen. Stravinsky believed that to simply listen and to become accustomed to a certain sound did not necessarily coincide with the music having been properly heard or understood (Williams 2004: 47).

Authors such as Philip (2004), Day (2000) and Thèberge (1997) discuss the influence of live performances and commercial recordings on the experience of the listener. However, unlike Williams' study they do not specifically address how the implications and influences of listening are different for music students who use commercial recordings and live performances as pedagogical tools (Williams: 31). In light of the aforementioned issues involved with listening, such as expectations, perfection, repeatability, familiarity and aura in regards to commercial recordings and live performance, this current study seeks further to clarify the issues involved for tertiary music students in listening both to commercial recordings and to live performances in order to enhance learning.

According to Hallam, there is some question about the importance of the quantity of practice required to obtain adequate performance standard; instead, improvement is more reliant on the quality rather than the quantity of the practice (Hallam 2001: 27). The quality of practice relies on 'organisation, planning, concentration [and] use of appropriate practising strategies' as well as the attitude and motivation of the student (Hallam 2006: 127). On the issue of the

quality and quantity of practice, there have been attempts to establish a student's capacity to 'learn to learn' (Hallam 2001: 27), thinking about one's own thoughts is central in regards to the concept of metacognition. Thinking about one's thoughts involves thinking of what one knows, what one is currently doing or what one's current cognitive or affective state is (Hacker, 1998: 3; Hallam 2001: 127)

The greatest influence on attitude towards practice is a person's own self-determination and 'engagement in self evaluation [which] enhances perceived attainment and develops greater independence and planning ability' (Brandstrom 1995-6 cited in Hallam 2006: 127). Motivation and self-regulation are important dimensions of music practice and education according to numerous studies cited by Hallam (2006). In her previous studies, Hallam (1997, 2001) demonstrated that considerable music expertise (Whitaker 1996) and the development of skills is required before self correction was performed by music students (Hallam 2006: 127). Hallam explains that the effectiveness of practice is enhanced by the establishment of 'appropriate schemata [such as recordings] against which to evaluate practice' and describes these schemata as being of great importance for music students (Hallam 2006: 135). A useful tool in establishing the schemata against which to evaluate practice and correct mistakes are recorded aural modes (Folts 1973; Hallam 2006: 127; Puopolo 1971). Hallam believes that following studies by Schon (1983) and Kolb (1984), music educators should be concerned with enabling students to learn how to learn and that there has been little research exploring this in music education (Hallam 2001: 28).

The development of music performance skills and how students become expert performers are of interest to music educators and motivation is an essential part of developing these skills. Schmidt (2005) believes that research into the motivation of music students 'is an important issue facing instrumental music educators [and accordingly a] growing body of motivational

research involving instrumental music students has emerged' (Schmidt 2005: 135). There are complex dynamics between motivation, achievement and practice that appear to be based on intrinsic and extrinsic motives (Hallam 2006: 136). Described as 'one of the most important strands of motivational research' (O'Neill and McPherson 2002: 32), O'Neill and McPherson (2002) together with Hallam (2006) discuss the *expectancy value theory*. Originally established by Dr Fishbein in 1963 (Ajzen and Fishbein 1980, 2008), the *expectancy value theory* attempts to provide a framework for why individuals show interest in certain activities and the degree to which they believe them to hold future importance.

O'Neill and McPherson describe the *expectancy value theory* slightly differently to Hallam; Hallam describes the *expectancy value theory* as having three main value components, whereas O'Neill and McPherson describe it as having four. In Hallam's theory, the first component, 'value components [relate to] students' beliefs about the importance and value of the task(s)' they are performing (Hallam 2006: 145). The second, 'expectancy components, [refer to] students' beliefs about their ability or skill to perform the task' (Hallam 2006: 145). The third and final component is 'affective components [involving] students' feelings about themselves or their emotional reactions to the task' (Hallam 2006: 145). Hallam explains that the components of the *expectancy value theory* are not independent of each other and there are complex interactions between them' (Hallam 2006: 145). The second and third components indicate that, student's motivation to practice and subsequent achievement is influenced by whether they believe they have the ability to complete a task successfully and the subsequent feelings they have on completion of the task. This relates to students' use of commercial recordings to learn, as recordings when used as pedagogical tools present for students an absolute standard to reach and emulate. How achievable students perceive it is to attain the standard they hear subsequently influences their motivation to practice and accordingly the outcomes of their practice. Recordings are used widely as educational tools and consequently,

the motivation they provide students is an important factor in determining their effectiveness as pedagogical tools and how best to use and utilise them in education.

In the O'Neill and McPherson theory the components, although similar, differ to those described by Hallam. The first, 'attainment value', refers to how important a student believes it is to do well on a task. The second component is intrinsic motivation and defined by the feeling of enjoyment an instrumentalist has when performing for the sheer pleasure of making music (O'Neill and McPherson 2002: 32). The third, in line with Hallam's first component, describes how 'students form perceptions of the extrinsic utility value of learning their instrument according to its usefulness to their future goals, including career choices'(O'Neill and McPherson 2002: 32). The fourth and final component differs most from those described by Hallam and is expressed as 'the perceived negative aspects of learning an instrument, such as the amount of practice needed to continue improving, which are defined as the perceived cost of engaging in the activity' (O'Neill and McPherson 2002: 32). O'Neill and McPherson's fourth component indicates that, the negativities associated with practicing an instrument have an influence on a students' motivation to practice. This study aims to explore whether the use of recordings as pedagogical tools does have any negative impact on tertiary music student's motivation, which may influence their attitudes towards practice.

Described in the literature as having both negative and positive motivations, competitive attitudes are an accepted part of tertiary music study; competition, comparison and the desire to play like or better than others, are ingrained in music (Austin 1990: 46). Kohn's (1987, November) statement that competition does not 'have to come from trying to defeat someone else,' but 'can be based on comparing one's performance with some absolute standard,' such as professional recordings, is directly relevant to this study on the emulation of commercial recordings in tertiary music education (Kohn 1987, November: 145). The absolute standard

described by Kohn seems to replace what we might call external competition with internal competition, where the absolute standard is an internal goal or benchmark that one wishes to reach. The approach of listening to enhance learning through imitation represents the comparison of oneself to an absolute goal and internal competition with the concept of an 'ideal' performance to which on aspires (Kohn 1987, November: 145).

The desire for recognition motivates many proficient student musicians to do what is necessary—namely, practice—to increase their level of performance' (Woody 2004: 17). Austin attributes to competition the positive motivations of 'generating student interest … measuring levels of achievement in comparison to other competitors' and stimulating students to perform better (Austin 1990: 45). Many people however, Kohn says, confuse the term competence with 'competitive success' or 'winning,' which are not homogenous. It is quite possible to display competence without competitive behaviour; competence can be defined as doing something successfully in relation to an accepted standard and feelings of competence are central to each individual's self-esteem (Kohn 1987, November: 145). In a society he believes places more importance on competitiveness than competence, Kohn contends that competition undermines character instead of building it, with the potential for students to develop a 'win at all costs' attitude and creating negative motivations to succeed.

Possible selves as discussed by Markus and Ruvolvo (1989), are an individual's perception of a positive possible future self and these provide a powerful motivator in the establishment of long term goals and also encourage the 'setting up of interim goals which need to be achieved en route' (Hallam 2006: 146). When individuals approach a task, pre-formed expectations of how well a task can be completed are based on previous performances; this is known as self efficacy (Bandura 1977). Motivation relies heavily on self-efficacy, which is associated with the degree to which a musician believes in their own ability and capacity to achieve certain

goals (O'Neill and McPherson 2002: 32). Upon successful learning or completion of a task, the positive impact on student's self esteem and motivation can be carried forward to subsequent learning tasks. 'Conversely, when learning outcomes are negative, motivation is often impaired' (Hallam 2006: 144). Causes for succeeding or failing can be categorised as 'stable or unstable, controllable or uncontrollable, and internal or external' (Hallam 2006: 152). Failure that can be attributed to something unstable or accidental, such as an unlikely recurrence, does not impact much on student's self esteem; however, if failure is attributed to something stable and therefore potentially recurring, such as lack of ability, then a student can form an expectation of continued failure. Where student's goals and beliefs about their likelihood of success have been manipulated, those adopting performance goals were more vulnerable to developing helpless responses (Dweck and Elliot 1988) particularly when they focused on the possibility of failure (Church and Elliot 1997). Miller feels that music educators would be wiser to invest less time pursuing 'competitive success,' which often involves failure and instead, determine how best to encourage stable patterns of long term motivation and achievement' (R. E. Miller 1994: 30). Addressed in this current study is whether listening to professional musicians on recordings either provide a powerful motivator in the establishment of goals for tertiary students to meet, or manipulate students' attitudes to believe that reaching an acceptable standard is unachievable. If students compare their performance abilities to an absolute standard then they may potentially feel that they lack the ability to reach a successful level and form feelings of incompetence and expectations of failure.

The self-efficacy and perceptions of student's own competence determines their behaviour through influence on choices that are made; the effort expended to complete a task (Pajares 1996: 335) and consequently, a student's performance of that task and their resulting feelings of self-worth (O'Neill and McPherson 2002: 32). Students' perceptions of personal ability and

competence influence their motivation to engage in that activity and future decisions of continued skill development (Hackett 1995) and this study examines how listening to support learning might influence tertiary music students perceptions of personal ability. ‘There is little doubt that motivation … in instrumental learning is inextricably linked to the social and cultural environment’ (Jørgensen and Lehmann 1997: 62), as Hallam describes, ‘our personality, self-concept and self-esteem are in part, determined by the feedback and the attainability of the standards set for us by our learning environment’ (Hallam 2006: 144).

Chapter 3: Methodology

The theoretical framework for this study is derived from the literature relating to the influences that audio recordings have had on the way audiences listen and musicians perform. The ideas introduced in the literature review by Day (2000), Philip (2004) Katz (2005) and Thèberge (1997), examine how the development of listening devices and technology has shaped the way that music is accessed, heard and consumed today, providing listeners with two very different listening and performance contexts. Congruent with the categorization by Williams (2004), of students as unique listeners who listen to learn, the issues associated with listening to live and recorded performances are pertinent to the performance development of tertiary flute students and have been used to underpin the design of this study. As perspective contingent, method approaches within humanities are not inimical to the use of statistical methodology from the social sciences. This study aims to use scientific method as an investigative tool to highlight possible areas of significance, while retaining the perspective contingent focus of a humanities study. It is for this reason that both quantitative and qualitative responses have been recorded.

This preliminary study aims to test the survey questions, research method and procedures, to identify the relevant issues involved in engaging with recorded and live music in order to enhance learning. This study also intends to extend the discussion by establishing a framework for use in further investigation of the issues associated with the use of listening as a pedagogical tool, in the development of tertiary performance skills. The methodology of this study can then be extended and applied to broader questions concerning the circumstances, need and impact of a preference for either listening context from within an educational trajectory. To obtain answers to the research questions this study employed a three-stage

survey approach, including critical listening and focused responses in the analysis of specific performances, both live and recorded by the same performer. The surveys were administered to tertiary students who had given their informed consent to participate in the study.

3.1 Research questions and context of the surveys

In order to identify the impact of listening to both recorded and live performances on the attitudes of tertiary students, a survey method approach was devised. Based on the following research questions the surveys aimed to establish tertiary participants' listening habits, their attitudes concerning listening to enhance learning and their assessment of performances via both commercial recording and live performance means. The research questions established to examine these issues were:

> What are tertiary flute students' listening habits and to what extent do they listen to live performances and commercial recordings to assist with the learning of repertoire?

> Are there any differences in tertiary flute students' assessments of musical performances, whether listening to commercial recordings or live performances?

> How does listening to live performances and commercial recordings impact tertiary flute students' attitudes towards learning repertoire, practicing and performing?

Does listening to commercial recordings have any impact on tertiary flute students' attitudes towards listening to live performances?

The context for these questions required selected performers to whom student participants could listen on both commercial recordings and in live performance of the same or similar repertoire. For reasons of practicality regarding the choice of performers and repertoire for assessment, and as a preliminary research project, it was also decided that the scope of the student participants should be limited to involve a group of one speciality, namely the flute.

A unique opportunity presented itself as a context for this project namely, the Australian Flute Festival [AFF] which was held in Adelaide in October, 2009. The AFF offered a focused 3.5 day performance event attended by amateur flautists, professional performers, teachers and tertiary flute students from The University of Adelaide and other Australian institutions. Co-directed by Lyndie and David Leviston,[7] the AFF is held bi-annually and 'primarily provides a flute event of international standing for the Australasian region, with a view to attracting flute players of all standards and levels of interest from around the world to participate and attend' (Leviston and Leviston 2009). Performances were given by both professionals and students and various competitions were held, including categories for young and advanced solo flute, piccolo solo, flute ensemble and flute choir; in 2009 the AFF awarded $56,250 worth of prizes to competition winners. Trade stands of instruments, sheet music and other flute related products are also an integral part of the festival.

[7] David and Lyndie Leviston also run a retail flute business in Sydney called Flutes and Flutists, opened in 1990, and are the preeminent flute specialist supplier in Australasia for leading brands of flutes and flute servicing.

The international feature artists of the 2009 AFF included the flautists Uwe Grodd from Auckland, Tara-Helen O'Conner from New York and Jean Ferrandis from France who all presented a number of performances and masterclasses. Performances and workshops were also given by the Australian flautists, Sally Walker, Bridget Douglas, Lisa-Maree Amos, Alexa Still, Margaret Crawford, Peter Sheridan, Adelaide Symphony Orchestra's Geoffrey Collins and Julia Grenfell, and The University of Adelaide's Head of Woodwind, Associate Professor Elizabeth Koch. Attendance at the AFF costs approximately $300 per attendee, with additional costs required to audition for competitions and masterclasses. The AFF events are open to all attendees, providing them with extensive opportunities to listen to live performances of international and local artists, as well as performances and masterclasses of Australasian students. The uniqueness in Australia of this festival and the Leviston's prominent position in Australian flute sales and repair, mean that the AFF is an event widely advertised and sought out in the Australian flute community; to attend comparable events, Australian flautists are required to travel overseas to conventions such as the New York National Flute Association Convention. Attended by professionals, teachers, students and amateur flautists from around Australia and New Zealand, the attendees at the AFF present a broad representation of the Australasian flute community.

There were a number of reasons that made the AFF such an appropriate and convenient context for this project. In 2009 the AFF was held at The Elder Conservatorium of Music in Adelaide, providing an easily accessible live performance event for participants to attend. Moreover, the AFF involved Australian tertiary flute students already attending a variety of professional standard, live performances out of personal interest. Associate Professor Elizabeth Koch, the Head of Woodwind at The University of Adelaide, was also the Artistic Director of the 2009 AFF and provided an important contact and resource. Finally, the researcher is a graduate performance flautist and therefore possesses an intimate knowledge

about this field and its performance repertoire, also previously having formed valuable contacts with the performers, teachers, universities and event organisers. As a result, the AFF offered a uniquely suitable opportunity to undertake research into tertiary students' listening habits through their involvement in the assessment of professional standard live performances and recordings.

3.2 Listening examples

Assessment by students of both commercial recordings and live performances was crucial in addressing the research questions of this study. In order to select both live and recorded performances for assessment, it was necessary to identify performers from the AFF whose performance repertoire at the festival matched repertoire that they had previously released on commercial recording. Consequently, performers who would be suitable for participation in this study had to fit one of the following criteria:

1. Professional Australian or international flautists who are performing a work live at the October 2009 Australian Flute Festival in Adelaide, and which they have previously released as a commercial recording.

2. Professional Australian or international flautists who are performing a work live at the October 2009 Australian Flute Festival in Adelaide, in the same style and by the same composer of a work which they have previously released as a commercial recording.

There were three professional performers identified who were performing repertoire in the AFF that was the same or similar as their own previously released recordings; Geoffrey Collins from Adelaide, Alexa Still from Sydney, and Uwe Grodd from Auckland, New Zealand. The performers selected for the listening examples in this study were the two Australian artists. The first listening example, Adelaide Symphony Orchestra's Geoffrey Collins' recording of the Richard Meale, *Sonata for Flute and Piano* (1960), recorded in 1988 and his scheduled performance of the same work at the Australian Flute Festival, 2009. The second listening example was The University of Sydney Conservatorium Alexa Still's recording of Joseph Schwantner, *Black Anemones*, (1981) and *Soaring*, (1986) for flute and piano recorded in 2008, and her scheduled performance of *Looking Back* (2009), for flute and piano by Joseph Schwantner, at the Australian Flute Festival, 2009.

Two professional performers were selected as listening examples, as this allowed for any problems caused by unforeseen circumstances (such as a performer changing their repertoire or withdrawing from the festival) without jeopardising the success of a study based on live performances that could not be recreated. It was also decided that two was the maximum number of listening examples that could be used, without diminishing the quality of the answers, by overloading the participants with too many questions. The Australian artists were selected to complement a study which focuses on Australian tertiary flute students. Additionally, Geoffrey Collins and Alexa Still were performing in the same concert at the AFF which was logistically beneficial as it enabled participants to complete the survey for both during the same concert and provided consistency in performance acoustics. Prior to participation, the performers both signed a consent form permitting the use of their

performance for this study and allowing an audio recording of that performance to be made, should the need arise to use it during the study.[8]

3.3 Participants

The participants for this study were drawn from tertiary flute students attending the Australian Flute Festival in Adelaide, 2009. With the intention of increasing participant numbers, recent graduates were also included in participant recruitment. More specifically, participants for the study were required to be aged 18 years or over and to fit into one of the following two categories:

1. Current Australian tertiary flute students enrolled part-time or full-time in an undergraduate or postgraduate music degree at The University of Adelaide or Monash University and who are attending the Australian Flute Festival at The University of Adelaide, October 2009.

2. Recent graduates who are defined as Australian flautists and who have completed an undergraduate or postgraduate music degree at The University of Adelaide or Monash University in the past five years and who are attending the Australian Flute Festival at The University of Adelaide, October 2009. This group was included with the intention of increasing the number of participants.

[8] See Appendix 1 for the performer consent form.

It was decided to recruit participants from the University of Adelaide and Monash University as the researcher has studied at both institutions and therefore had valuable contact with the staff and students at each. The researcher completed a Bachelor of Music Honours in flute performance at Monash in 2008 and is a current student in the Master of Music program at The University of Adelaide. In addition, the AFF was being held at The University of Adelaide where the Head of Woodwind, Associate Professor Elizabeth Koch, was also the Artistic Director of the Australian Flute Festival.

Although all participants were tertiary flute students, they differed greatly in their knowledge base, backgrounds and experiences, which had the potential to influence their listening habits and responses. All students possessed different expectations, performance abilities and approaches to playing and learning. For example, the institutional affiliation and the individualised nature of instrumental teaching methods will differ between universities and individual participants. Moreover, the experience of the participants will also differ depending on the level of tertiary studies they have completed. For example, undergraduate and specifically first year students will generally possess less experience and knowledge than postgraduate students and recent graduates. The pre-tertiary education of the participants also creates differences as some will have attended specialist music secondary schools and others will have attended secondary schools with almost no music programs at all. Therefore the quality of participants' previous educational listening experiences may differ greatly and influence their listening habits differently. Beyond their educational experiences and institutional affiliation, the financial circumstances of the participants will influence their listening experiences. Financial circumstance will influence the quality of the instruments played by participants and may consequently impact their opinion towards practice and study. A participant's financial commitment to obtain music and playback technology for personal listening may influence the quality and quantity of their individual listening experiences.

Similarly, financial reasons will influence the number and types of live concerts participants will attend. Finally, there are also differences in the number, variety, quality and cost of live performances accessible in Adelaide and Melbourne; students from the country are likely to have had less access to live concerts than those living closer to the CBD. Consequently, there are many factors which influence participants' listening habits and attitudes towards learning.

3.4 Data collection

Following negotiation between the researcher and staff at both The University of Adelaide and Monash University, arrangements were made for surveys to be administered during flute classes at the respective institutions. After the nature of the project and participant requirements had been explained, flute students were given the option of participating and those who agreed to be involved in the study were required to sign a consent form prior to completing Survey 1.[9] The surveys included listening assessments consisting of questions about the performance aspects of the specific commercial recordings and live performances being used, as well as general questions about participants' listening habits and attitudes towards listening and learning.

As a preliminary study, the number of participants who completed this study was not large, and therefore the results have limited statistical significance. The results in this study do represent attitudes of the study's participants, even if statistically they represent limited significance for the wider community of tertiary music students. Although numerically the

[9] See Appendix 2 for the participant consent form.

results are slight, there are interesting and coherent themes in the participant responses. By presenting the quantitative results in congruence with the qualitative responses of tertiary flute students, alongside expert testimonial of published studies, this study has significance in the area of music education, illuminating potential areas of importance and focus for further study. It is left to the reader to decide how the results could be applicable outside this study in the wider area of tertiary music education.

3.4.1 Surveys

The structure of this study was based on three surveys which were completed in the period of September to November 2009 by the same cohort of participants. The surveys were designed to gather data on participants' opinions across three listening contexts, namely, commercial recordings (Survey1), live performances (Survey 2) and recordings of live performances (Survey 3).

Survey 1: Commercial recordings

Survey 1 was administered immediately prior to the Australian Flute Festival between the 16-24th of September, 2009,[10] in several different sessions at The University of Adelaide and Monash University. This survey was based around two commercially released CD recordings, namely Geoffrey Collins' recording of Richard Meale's, *Sonata for Flute and Piano*, recorded in 1988; and Alexa Still's recording of Joseph

[10] See Appendix 3 for the complete Survey 1.

Schwantner *Black Anemones*, and *Soaring*, recorded in 2008. At both universities the audio playback equipment used speakers with stereo 'surround sound' in rooms of comparable size.

Survey 2: Live performances

Survey 2 was held at the Australian Flute Festival on the 3rd of October, 2009[11] and used two live performances at the AFF by the same performers as were heard in Survey 1. Geoffrey Collins played the same piece, Meale's *Sonata for Flute and Piano,* which was heard on the 1988 recording in Survey 1. Alexa Still performed an Australian premiere of a work for flute and piano by Joseph Schwantner, *Looking Back*. Although the repertoire was different from the Survey 1 recording of *Soaring* and *Black Anemones*, the composer was the same. The participants attended the AFF concert in Elder Hall at The University of Adelaide in which both Alexa Still and Geoffrey Collins were performing. The surveys were handed out as participants entered and the two listening assessments were completed while listening to each of the performances. The surveys were collected immediately after the performance. Two participants who completed Survey 1 were unable to attend the AFF performance and therefore did not complete Survey 2.

[11] See Appendix 4 for the complete Survey 2.

Survey 3: Recordings of live performances

Survey 3 was administered after the AFF between the 4th and 16th of November, 2009.[12] As noted earlier, recordings were made of the live performances used in Survey 2 at the AFF for the purpose of creating a backup. Survey 3 used these live recordings to provide another listening context for assessment. However, the participants were not told that the recordings were live or who the performers were, so as not to influence their responses based on previous opinions established in Survey 2. It appears that most of the participants did not realize that the recordings were of the same live performances which they had assessed in Survey 2. Survey 3 was added to the study after the completion of Survey 2, in order to complete a further listening assessment and to ask general questions about listening. Again, as in Survey 1, the listening examples were played in flute classes at The University of Adelaide and Monash University and again for both, the speakers and audio playback equipment were of comparable quality. The inclusion of a third survey after the commencement of the study proved to be partially ineffective as the participants had made a commitment to complete only two surveys and the third additional survey was held during the university exam period. Not all the participants were able to complete Survey 3 and the response rate for Survey 3 was much lower than the other two surveys. Consequently, the numerical data from the Survey 3 listening assessments has not been included in results discussion. There were however a number of questions in Survey 3 which have been included, as they were directly relevant to the research questions and obtained interesting responses.

[12] See Appendix 5 for the complete Survey 3.

3.4.2 Survey questions

To identify tertiary flute students' listening habits and the influence of listening on their attitudes towards study, practice, performance and further listening, the surveys comprised a mixture of multiple choice questions and open ended questions, which allowed for the collection of both quantitative and qualitative responses. Quantitative multiple choice questions gathered numerical data which illustrates the range and distribution of participant responses and enables the identification of trends. Qualitative open-ended questions asked participants to respond to questions using written words.

Both the wording and order of questions in this study were carefully established so that the questions were not leading, biased, or provided 'loaded' words that could influence the participants' answers to later questions. For example, a qualitative question asked 'how do you feel towards your own playing after listening to commercial recordings?' which leaves the question open to a much more honest and real response from the participant, rather than asking 'do you feel negative about your own playing after listening to recordings?' The latter way of asking this question influences the response by suggesting that the participant should feel negative, rather than positive, and provides them with prefacing feelings and words to use in their responses. By combining the use of quantitative and qualitative questions this study aimed to retain an individual element by allowing participants to express their own opinions and not simply select a number. Many of the survey questions required both quantitative and qualitative responses in order to collect more in-depth information about participants' attitudes. By integrating quantitative and qualitative components, in a study not geared towards definitive numerical objective conclusions, qualitative data is of primary importance in congruence with the quantitative results. Qualitative answers can support, or refute, the quantitative findings and in some cases they were indicative of how well the participants had

fully understood the questions and whether their quantitative responses were useful or possibly misleading.

There were several different types of questions used in the three surveys which aimed to differentiate between participants' listening habits and their perceptions of the different listening contexts.[13]

Demographic questions

Demographic Questions appeared in Survey 1 and simply aked for general participant information to establish an overview of the participants in this study.

Listening assessments

In each of the surveys the participants listened and responded to the two listening examples, as performed by Alexa Still and Geoffry Collins. While listening, participants completed a separate but identical quantitative and qualitative assessment for each listening example; assessing the specific musical aspects of each listening example as well as each listening example as a whole. Also included in this section were general quantitative and qualitative questions about participant attitudes, which related directly to the specific listening example, whether recording or live performance. An identical listening assessment appeared in each of the three surveys for direct comparison between participant responses to the same questions for the three listening contexts: commercial recordings; live performances; and live recordings. As Survey 2 was

[13] See Appendix 6 for an example of each of the different types of questions.

completed in the time frame of a live performance it comprised only of the listening assessments and did not include any other general listening questions.

Focus questions

Focus questions provided the primary source of information for the study as they aimed to directly answer the research questions. Focus questions asked participants general questions about listening habits, attitudes towards and motivation levels derived from, both commercial recordings and live performances. Questions of this kind were included in both Surveys 1 and 3 to gain more of a general understanding about participants' attitudes to listening, rather than about specific performances as in the listening assessments.

Placebo questions

Placebo questions were included in Survey 1 to divert participants' attention away from the specific aims of the study and therefore, to prevent participants from providing what they viewed were expected responses. Placebo questions do not intend to answer the research questions so have not been included at all in the results discussion. In a similar way, the wording of the participant consent forms, while not misleading, did not divulge the specific aims of the study.

Included in the listening assessments and focus questions were several questions that appeared in all three surveys, either in exact repetition or in a 'before, during and after'

format. Repetition of these questions across all three surveys allowed for a direct comparison of participant responses to the different listening contexts. However, the responses to Survey 3 questions that were intended to be analysed against questions from Surveys 1 and 2 have not been included in the results discussion; as already explained, the number of participants for Survey 3 were significantly lower and these results do not present a viable comparison.

3.5 Analysis methods

The Statistical Package for the Social Sciences (SPSS) software was identified as the best tool for analysis of the quantitative data in this study. SPSS is the standard international IBM software used for processing survey data and for statistical analysis in the social sciences. The quantitative data collected has been analysed using descriptive statistics presented in tables to show the distribution of participant responses, and in most cases the minimum, maximum and mean of the results for each question have been provided. Descriptive statistics present a result of what occurred in this particular study, the results are purely descriptive of the differences observed between participant responses and do not predict the probability or reason for these. A greater number of participants would allow for the use of predictive statistics, creating a multi-dimensional approach in which to explore the relationship between variables that "predict" the likelihood of the matter under investigation occurring again in the future. The data pool of this study however, was not great enough to employ effective use of predictive statistics. Of great importance in a study not geared towards definitive, numerical and objective conclusions is the qualitative data that was collected and which has been discussed in congruence with the quantitative results.

3.6 Use of listening in this thesis

In this current study, the term "listening" is used to describe both listening to recorded and live music, with the knowledge that these are different forms of listening, each involving different elements. When referring to listening with regard to live performance, the term listening includes the fundamental visual and spatial elements of live performance and their potential influence on participants' aural experiences. For reasons of control regarding the spatial elements of the live performance venue, participants were all seated in the same area of the concert hall during the listening assessment; both of the live performance listening examples used were performed at the same venue.

A performer's performance style and stage presence also influences the listener's aural experience; such is the nature of live performance. Consequently, in this study participant response to questions concerning their listening experiences and opinions to either listening context may be influenced by visual and spatial elements as well as the musical content of the work being listened to. The influence of non-aural elements constitutes a part of a participant's listening experience and consequently, the term listening in this study includes any non-audio element that may influence participants' listening expectations, perceptions and experiences. This approach to listening aims to establish how the two different listening contexts, regardless of their differences, influence the participants' listening habits and attitudes.

Chapter 4: Discussion of Results

Student participants from both The University of Adelaide's Elder Conservatorium of Music and the Monash University Academy of Performing Arts in Melbourne were surveyed to collect data with an aim to investigate the use of commercial recordings and live performances as pedagogical tools. The study focused on tertiary flute students as listeners, learners and performers. Using congruent quantitative and qualitative results, this chapter reports on the relevant data collected from across the three surveys, identifying the central issues involved with listening to enhance learning. Survey questions explored the function of recorded and live music when used as learning tools and highlighted the potential for further research along similar or extended lines of approach. This results discussion has been structured according to the four research questions, by analysing together specific survey questions which address these.

This discussion of results employs descriptive statistics to present a result of what occurred in the study, using tables to present the distribution of participant responses to the questions. The number of respondents (N) is indicated alongside each set of results; thus, N=26 indicates that there were twenty-six participants who completed that specific question. As noted previously in the Chapter 3 section on limitations, this data pool is relatively small and in addition, the participant numbers vary between the three surveys in this study; the third survey being added later and held during the university exam period when there were limited participants available to participate. Consequently, due to small N values, the differences in numerical results in this study are not very large, although, the results do still present some trends or preferences shown by the participants. Using the limited number of participants available for

this preliminary study, the results of these surveys cannot claim to be statistically significant beyond the scope of this discussion; for example, one could not use these results to generalise any national trends across Australian tertiary education. Ultimately, for research which is not geared towards definitive, numerical and objective conclusions, statistical significance is not imperative in the preliminary identification of the issues associated with listening to enhance learning. Despite statistically insignificant responses, many of the results were numerically and textually interesting. Consequently, this study instead talks about significance in a non-statistical way, referring to the significance that results may have on participants' attitudes; what considerations this may have within an educational trajectory; and the potential for further study along similar or extended lines of approach.

Across the three surveys a large amount of data was collected and in collating the results it became apparent that certain questions were not relevant to the main research themes. Relevance here concerns results that either support or refute the research questions and consequently, the results that were informative to the research questions have been included in this results discussion. An absence of informative results sometimes occurred because a substantial number of participants omitted to answer a question, which further decreased the size of the dataset (N) and rendered the results either inconclusive or extremely limited. Another reason for data exclusion was when participants' qualitative responses indicated a considerable lack of understanding, or considerably different interpretations of the question being asked. While it is expected that to some degree participants interpret questions differently, in these instances the differences were too great for any conclusions to be drawn;[14] consequently, neither the quantitative nor qualitative results for these questions could be considered as reliable. Finally, upon implementation, several survey questions proved to be ineffective in their execution and irrelevant with regard to the research questions.

[14] Examples of some survey questions which were interpreted differently can be seen in Appendix 7.

Despite the shortcomings inherent in any undertaking of this scale and design, results were obtained from the surveys that illuminate the research questions. The conviction with which many participants responded to various survey questions clearly demonstrates that, the focus of this study is of direct interest and a relevant issue among those studying their craft with serious intent in a tertiary environment. Table 1 shows the number of participants for each of the three surveys in this study.

Table 1: Number of participants in each survey.

Survey 1	**Survey 2**	**Survey 3**
N = 26	N = 23	N = 14

General questions from Survey 3 about commercial recordings and live performances that were directly informative to the research questions have been included in the following discussion. However, due to previously mentioned reasons outside the researcher's control, only fourteen participants completed Survey 3 and as the number of participants for this study was already relatively small, parts of Survey 3 have been omitted from the results discussion. In particular, results that were intended to be compared across the three surveys have not been included, as fourteen participants cannot effectively be compared to the twenty-six and twenty-three participants from Surveys 1 and 2 respectively. For example, the listening assessments from Survey 3 have not been included in the discussion of results, although the omitted tables from Survey 3 are included in the appendix for interest.

4.1 Participant demographics

As discussed in Chapter 3, demographic questions were asked at the start of Survey 1 to establish an overview of the participants, both as individuals and as a collective cohort of tertiary flute students. Of the twenty-six participants, twenty-five of them were female and one was male, an accurate reflection of the largely female dominated field of tertiary flute students. The majority of participants, sixteen, inclusive of the only male participant, were students of the University of Adelaide and the remaining ten participants were from Monash University (see Table 2). It is not surprising that the greater number of participants were from Adelaide, as the 2009 Australian Flute Festival was held in Adelaide and was consequently more accessible for Adelaide students to attend.

Table 2: Participant's gender and university.

	Adelaide	**Monash**	**Total**
Female	15	10	25
Male	1	0	1
Total	16	10	26

N=26

Survey 1, Demographics

As outlined in the description of participant selection in Chapter 3, all participants were flute students currently or recently enrolled in a university music program within the previous five years. All but two participants were enrolled in an undergraduate university degree at the time, with the remaining two participants being enrolled in postgraduate study. Only one participant was a part-time student and twenty-five participants were completing full-time studies (see Table 3). Despite allowing for the inclusion of recent graduates to increase participant numbers, there were no recent graduates involved in this study.

Table 3: Level of university study and status.

	Full-time	**Part-time**	**Total**
Undergraduate	23	1	24
Postgraduate	2		2
Total	25	1	26

N=26

Survey 1, Demographics

Of the twenty-four participants who were enrolled in an undergraduate degree, there was almost an even spread of students across the four year levels. In this study group five participants were first year students, there were six participants in second year and the same in third year as shown in Table 4. As is common practice in university reporting, Honours students are regarded as undergraduates, whereas postgraduate refers to Masters level and beyond. In this study, five participants were completing fourth or Honours year and two

participants were in 5th year, enrolled in postgraduate Master of Music programs. Table 4 also shows that the large majority of participants, twenty-two, fall into the 18-23 age range typical of undergraduate students. The 23-25 age group comprises of only two participants; while the age groups 25-30 and 41-45 include only one participant each; no participants fell into the 31-40 age group.

Table 4: Participant's university year level and age.

	18 - 21	**21 - 23**	**23 - 25**	**25 - 30**	**31 - 40**	**41 - 50**	**Total**
1st Year	4	1					5
2nd Year	4	1				1	6
3rd Year	3	3					6
4th Year Honours	2	3	2				7
5th Year Masters		1		1			2
Total	13	9	2	1	0	1	26

N= 26

Survey 1, Demographics

The participants of this study were enrolled in six different degrees and majored in five diverse areas of study (see Table 5). There were eleven participants in this study completing their Bachelor of Music, five participants who had completed a BMus and were currently

completing their Honours; and two participants who were enrolled in Master of Music in performance, having previously completed a Bachelor of Music Honours. Enrolled in double degrees were eight participants; four participants were enrolled in a Bachelor of Music/Arts and the remaining four in a Bachelor of Music Education. Twenty-one participants, the largest group, majored in performance, two participants majored in Psychology and the final three students were majors in History, Integrated Studies and International Studies.

Table 5: Course and major.

Course	Enrolment numbers
BMus	11
BMus BA	4
BMus ED	4
BMus Hons	5
MMus	2

N=26

Survey 1, Demographics

Finally, in establishing the demographics of the participants in this study it is interesting to observe the diversity in participants' musical education backgrounds, as these represent a variety of states and schools, teaching styles, access to opportunities, availability of equipment and exposure to live music performance. Seven participants, approximately a

quarter, attended recognised specialist music schools such as Marryatville and Brighton High Schools in Adelaide and Blackburn High school in Melbourne (see Table 6). There were eight participants who originally came from regional or country areas, while interstate students accounted for four participants. Combining the regional and interstate figures, a substantial twelve participants were possibly living away from home. Such diversity in participants' educational backgrounds and living arrangements is possibly one of the greatest factors in determining their listening habits, because it has the potential to impact access to resources, such as time to practice, transport and financial commitment to purchasing music and concert tickets.

Table 6: Participant attendance at specialist or non-specialist music schools and participant's hometown.

	Specialist music	Non- specialist	Total
Adelaide	6	3	9
Regional S.A.		2	2
Melbourne	1	4	5
Regional Victoria		4	4
Sydney		3	3
Regional NSW		2	2
Tasmania		1	1
Total	7	19	26

N=26

Survey 1, Question 1 and Question 43

4.2 Participants' listening habits

Participants' listening habits are determined by a range of influences including listening intent,[15] financial limitations, convenience and time constraints. In response to the first research question—what are tertiary flute students' listening habits and to what extent do they listen to live performances and commercial recordings to assist with the learning of repertoire?—the following discussion aims to identify listening preferences and some of the reasons and limitations which influence participants' listening habits with regard to both commercial recordings and live performances.

Prior to commencing Survey 1, the participants were informed that questions about listening to commercial recordings and live performances specifically referred to listening to music that was related to their studies, rather than any listening to non-study related genres. For example, these questions referred to attendance at orchestral performances and listening to solo flute recordings, rather than attendance at rock concerts and listening to pop recordings. It was explained to the participants that listening to such music did not have to occur solely for tertiary study purposes, but may also be for listening enjoyment. In Survey 1, participants were asked questions about: their listening habits regarding commercial recordings and live performances; their access to listening devices and music recordings; their reasons for listening to recordings; and their performance attendance and participation habits, the responses to which have been presented in the following discussion.

[15] Listening intent refers to participants' desire to listen. Participants may own the most up to date listening technology and have access to a wide range of recordings; however, intent or desire to use these for listening is also required for participants to engage in any form of listening.

4.2.1 Listening habits concerning commercial recordings

While participants' decisions to engage in listening to recorded music are based on a range of motives, their listening habits are largely determined by the availability and ownership of listening technology. When asked about ownership and use of listening technology, with the option of circling more than one response, two listening devices were most commonly owned by participants: twenty-four participants owned an iPod/MP3 player and twenty-four owned a computer; only two participants did not own one or both of these (see Table 7). A very high number of participants, twenty-three, also owned CD players and an additional six participants owned a portable CD player. Other listening devices specified by participants such as mini disks and mobile phones used for listening, were owned by four participants.

The aforementioned figures are based solely on ownership and participants were also asked which of these devices they had actually used on a regular basis in the last month. Corresponding with results for ownership, iPod/MP3 players were the most frequently used by participants, although only nineteen participants used them regularly despite a greater percentage of ownership. Likewise, only eighteen participants regularly used their CD player and three their portable CD player, despite ownership of CD playing devices being higher. The difference between ownership and use was greatest for computers, as only seventeen participants used them regularly for listening, while seven participants did not. Amongst the participants fourteen had used computers for listening through YouTube, a free video sharing website which allows anyone to watch videos or to subscribe, upload and share their own professional or amateur videos; this listening medium differs from the others as it also includes a visual element and there is little or no control over the quality of recordings that are posted. Although only four participants said they owned other devices for listening, five said that they had used other listening devices frequently in the last month.

Table 7: Participant ownership and use of listening devices.

	Owned	Used regularly
iPod/MP3 player	24	19
Computer	24	17
CD player	23	18
Portable CD player	6	3
Other	4	5

N=26

Survey 1, Question 3 and Question 4

Opportunities to listen to recorded music are extensive and available to all participants beyond ownership of listening technology. Ownership does not equate to use for a number of obvious reasons such as, time constraints, convenience and an absence of listening intent. However, there are also technology specific reasons why not all participants who own listening technology use it. Prevalent in modern society, digital music can be listened to not only on iPod/MP3 players but also on computers, a possible reason for the five participant decrease between ownership and use of iPod/MP3 players. Computers also allow for greater listening experiences without the ownership of recorded music. Further, a likely reason why not all owners of CD players regularly use them is because this listening technology has been superseded by the iPod/MP3 player. Music on CD can be easily transferred onto a computer or an iPod/MP3 player for listening. A number of participants who owned CD players also owned iPod/MP3 players and computers which they may have regularly listened to instead.

These results also indicate the saturated nature of listening technology in today's society, as all participants owned between one and four listening devices and twenty-four, almost all participants, owned the most up to date listening technology, namely MP3 digital music players.

When asked about preferences for listening to particular recording labels (see Table 8), the largest group of thirteen participants indicated a listening preference for the *Naxos* label. This was not surprising as both The University of Adelaide and Monash University subscribe to *Naxos Online*, an extensive online database of recordings accessible for music students both at home and on campus. *Naxos* CDs are also available for purchase at many CD retailers. By completing an extensive search of the terms live, unedited and in-concert recordings on the *Naxos Online* database, it appears that less than 2% of their recordings are labelled as unedited or live; although it remains ambiguous as to exactly what percentage actually are. When searching through recordings on *Naxos Online* it is neither obvious nor immediately clear whether the recordings are of live performances, unless you specifically use search terms, such as 'live recording' or read the small print in the recording details.

Knowledge of whether a recording is live or studio recorded, unedited or edited has the potential to alter a listener's listening approach and expectations of the recording quality. In an educational context, student expectations of any recording used to enhance learning may potentially influence performance development and attitudes; consequently knowledge of the production context of recorded music is reasonably of significance in establishing appropriate learning expectations.

Table 8: Participant's preferred recording labels.

	No. of Participants Preferred
EMI	6
NAXOS	13
DECCA	2
naive	0
Tall Poppies	3
Other	5
None	8

N=26

Survey 1, Question 5. b)

The lack of clarity concerning the production contexts of recordings is not unique to *Naxos Online* and the issue of whether recordings are edited and to what extent any editing occurs, raises the issue of informed listening. The idea of informed listening involves engaging in music listening fully aware of the production context to which one is listening and will be discussed later in this chapter in conjunction with other results. The recording label *EMI* was the second most preferred with a preference shown by six participants, the *Tall Poppies* label

was preferred by three participants and *Decca* by two, while none of the participants indicated a preference for the recording label *naive*. Indicating preference for recording labels not listed were five participants who specifically named *Harmonia Mundi* and finally, showing no preference for any recording label were eight participants. There are more than twenty-six responses to this question as participants were allowed to indicate more than one preference.

Participants were also asked, again with the option of selecting more than one from a list, which type of ensembles they listened to most on recordings.[16] Table 9 illustrates the types of recordings, related to study, that were listened to most by participants and shows what number of participants did and did not listen to each. All participants regularly listened to flute and piano recordings and twenty-two to unaccompanied solo flute recordings. Orchestral recordings were listened to regularly by twenty participants and chamber recordings were the least frequently listened to by only fourteen; other recordings to those not listed were only selected by two of the participants.

[16] Again these included only those recordings that related their tertiary flute studies even if they were not listened to for study purposes.

Table 9: Types of commercial recordings listened to regarding ensemble.

	YES	NO
Flute and Piano	26	0
Solo Flute	22	4
Orchestral	20	6
Chamber	14	12
Other	2	24

N = 26

Survey 1, Question 5b)

A relevant reason for why all participants listen regularly to recordings of flute and piano music is because tertiary flute students have yearly repertoire exams which comprise principally of flute and piano repertoire. Even works originally composed for flute and orchestra have, for understandably logical reasons, reduced piano parts specifically for use in exams, competitions and auditions; students listen to various versions which use either piano or orchestral accompaniment. Solo flute music, also listened to regularly by the majority of participants, is the second most common type of repertoire performed in tertiary flute exams. Overall, participants listened more to recordings that were flute specific and related to their recital repertoire, either for enjoyment or study purposes, than they did to ensemble repertoire.

Participant's estimated expenditure per month on music recordings is shown in Table 10.[17] The values listed in the first column indicate the estimated amount of dollars spent per month and the second column the number of participants who spent that amount. Eight participants, nearly a third and the largest group, spent $20-29 a month. The second largest response was from participants who usually spent nothing on recordings in a month; five participants indicated that they spent nothing on recordings and two specifically stated that they listen only to free online databases or downloads. Of the remaining participants, four participants indicated that they spent less than $20 a month and five that they spent between $30-70.

[17] Although the question specified commercial recordings, in the first Survey 1 session participants asked if they could include iTunes/MP3 purchases and it was verbally agreed upon in this and further survey sessions that these should be included. The results do not show a breakdown of the amounts for either CD or iTunes/MP3 file purchases and are inclusive of both.

Table 10: Average amount spent on music recordings per month.

Amount spent on recordings	**No. of Participants**
$0	5
$<10	3
$ 10 – 19	1
$ 20 – 29	8
$ 30 – 39	2
$ 50 – 59	2
$ 60 – 70	1
I don't usually buy any recordings. I use free databases.	2

N = 24

Survey 1, Question 6

As previously mentioned, in an era of increasing access to digital technology, purchasing music is not a prerequisite for listening to it. Accordingly, listening opportunities available to tertiary music students is expanded by free, easy use of recorded music. Without purchasing recordings, students are able to listen to music on free online databases, copy borrowed CD's to their computer and download free music online. Although copying CDs and downloading some music technically may infringe copyright, such activity for personal use is probably widespread. Participant's monthly expenditure on music recordings may be influenced by

financial limitations, but also indicates a level of commitment by students to acquire music for listening.

4.2.2 Reasons for listening to commercial recordings

For many of the qualitative questions, participants were asked to select answers on a five-point scale which had the following values: one (strongly disagree); two (disagree); three (neutral); four (agree); and five (strongly agree). The analysis of the data from these questions is presented in tables providing three numeric values: the minimum, the maximum and the mean. The minimum represents the lowest answer selected by any participant on the five point scale. The maximum indicates the highest value selected by any participant, while the mean column represents a mean of all the participant responses for that specific question. These are the three most important numbers when examining the results. The minimum and maximum indicate between which values the distribution of the participants' answers lie; only one participant needed to select an answer for it to be included as a minimum or maximum.

The mean value, in addition to providing the mean of the participant responses, also gives an indication of how the participants' answers were distributed between the minimum and maximum values. For example, in Table 11 looking at the results for 'to broaden my general music knowledge,' the highest answer selected by participants was five (strongly agree), but answers as low as two (disagree) were also selected. The mean is exactly four, which would indicate that for this question the majority of participants selected higher answers, predominantly four (agree), rather than the minimum two (disagree). For this reason, some of

the tables will present results with the same minimum and maximum but with different means; this signifies that there is a different distribution of answers between the minimum and maximum values for those two questions. Broad agreement occurs when all participants respond to a question with either strongly agree or agree and similarly broad disagreement occurs when all participants respond to a question with either strongly disagree or disagree.

Participants were asked to indicate their level of agreement with six reasons that were put forward for listening to recordings; their responses, in descending order of mean value, are shown in Table 11.

Table 11: Level of agreement with reasons for listening to commercial recordings.

Reasons for listening to commercial recordings	**Min**	**Max**	**Mean**
For personal enjoyment	3	5	4.7
Learn ideas about interpretation when learning repertoire	4	5	4.4
To broaden my general musical knowledge	2	5	4.0
To learn standards of performance from professional musicians	2	5	4.0
My personal enjoyment of commercial recordings is influenced by relevance to my study	1	5	3.7
My personal enjoyment is influenced by technical quality of recording	2	4	3.3

N = 26

Survey 1, Question 7

The factor 'personal enjoyment' was selected by most participants as a reason for listening to recordings, although a few participants did state that they were neutral towards listening to commercial recordings for enjoyment; a mean of 4.7 indicates that the distribution of participants' responses lay predominantly between four (agree) and five (strongly agree). 'Listening to learn ideas about interpretation when learning repertoire' was the only reason for which 100% broad agreement[18] was shown amongst participants. The greatest range of participant responses were shown for the statement that enjoyment of a recording was 'influenced by relevance to my study' and answers were selected across the entire spectrum from one (strongly disagree) to five (strongly agree). With an almost neutral mean of 3.7 there is only slightly more agreement than not amongst participants with this statement. Possibly participants' opinions for this factor are so varied because when listening to enhance learning participants are likely to engage in a more conscious, focused listening and gain a greater insight into various aspects of the music; potentially heightening enjoyment for some participants but limiting it for others. Listening enjoyment is influenced by relevance to study; however, this does not indicate how student's enjoyment is influenced, or how enjoyment might subsequently have influence when applied to practice or performance. While personal enjoyment was most widely agreed upon by participants as a reason to listen to commercial recordings, participants agreed least and were almost neutral with the statement that the technical quality of a recording was likely to influence their personal enjoyment; indicating that it was a reason they paid little attention to in the decision to listen to recorded music.

[18] Broad agreement occurs when all participants respond to a question with either strongly agree or agree.

4.2.3 Performance attendance and participation habits

To establish participants' listening habits regarding live performances, questions were asked to determine the frequency of their attendance at live music concerts. In contrast to commercial recordings, participants also have the possibility of being exposed to live performance through their own involvement and additional questions sought to ascertain information about participant's participation in ensembles and performances related to their tertiary music study.

The frequency of participant's attendance at live performances in a typical fortnight is shown in Table 12. The first column indicates the number of performances attended and the second the number of participant responses. The greatest number of participants, twelve, attended two to three live performances on average per fortnight, while the second largest group of eight participants regularly attended only one performance a fortnight; only three participants attended four or more live concerts a fortnight.[19]

[19] As noted earlier, these are performances that are related to participants' tertiary music study even if they were attended for sheer enjoyment and not specifically for study purposes.

Table 12: Average number of live performances attended in a fortnight.

Number of Performances	**Participants**
1	8
2-3	12
4-5	2
6	1

N = 23

Survey 1, Question 8

Participants were also asked about their university ensemble involvement as seen in Table 13. The ensembles with the highest level of participant involvement were the wind symphony undertaken by twelve of the participants and chamber ensembles in which eleven participants were involved. Other ensembles and university orchestra had participant responses of eight and six respectively. For this question participants could indicate their involvement in more than one ensemble.

Table 13: University ensemble participation.

University Ensemble	YES	NO
University wind symphony	12	14
University chamber group	11	15
Other university ensemble	8	18
University orchestra	6	20

N = 26

Survey 1 Question 36

Ensemble involvement is not representative of the participants' preferred ensembles, nor influenced only by student's desire to participate. University ensemble involvement is also indicative of the ensemble opportunities available to participants. Opportunities for orchestral involvement are particularly limited as there are usually only two or three flute positions in an orchestra and these are assigned on the basis of competitive auditions. Wind symphonies usually have up to ten, or more, flute positions and chamber ensembles can comprise various figurations of instruments with one person per part. As part of the course requirements for both the universities involved in this study, the participants were required to be involved in at least one university ensemble. As indicated by the 'other' category, some participants were not members of an ensemble on their principal instrument of study and either due to the lack of positions available in other ensembles, or by choice, were members of a university choir.

Tertiary music students are exposed to live performances through their involvement in other ensembles and musical activities outside of their tertiary music studies. For some participants this is due to the lack of positions available in university ensembles. Involvement in external musical activities may be for means of income, however for many it is purely for reasons of enjoyment. Participants were asked about other musical commitments they had outside of university, and some participants responded with several answers.[20] Five participants indicated that were not involved in any extra musical activities, while one participant was involved in each of the following four categories; choir, musical shows, piano accompaniment, and church music. Only one participant in this study was involved in a professional ensemble as part of an Australian Youth Orchestra fellowship with the Tasmanian Symphony Orchestra and only one participant was involved in a state youth orchestra. There were three participants involved in national ensembles; two in the Australian Youth Orchestra and one the Australian Youth Band. Six participants were members of community wind or symphony orchestras and four in chamber ensembles. Finally, seven participants indicated involvement in teaching and conducting school ensembles.

Performance opportunities are an important part of tertiary music study and participants were asked how many live events they had performed in during the last month. [21] These included ensemble, solo, masterclass, eisteddfod, workshop and forum[22] performances. There were six participants who had not performed in any kind of live concert within the previous month, one of these being an Honours performance student. The majority of participants, seventeen, had performed in one to four performances in the previous month and one participant had undertaken six performances. There were two participants who had performed more than ten times in the past month, although they both indicated that this was an unusually high number.

[20] Survey 1, Question 39, N=26
[21] Survey 1, Question 37, N=26
[22] Forum is a weekly university performance class in which undergraduate students, excluding Honours students, are required to regularly perform in front of their peers.

Considering that twenty-one of the participants in this study were enrolled in single performance based degrees it is surprising that eight of them only attended on average one performance a fortnight and that six of them had not performed in any performances in the past month, including the Honours performance student. There are numerous performance opportunities available for participants through university workshops and performance forums, as well as many opportunities to attend live performances. Both universities give music students free entry into their weekly lunchtime concerts and a number of free tickets are also allocated to music students at university evening concerts; these concerts often showcase professional and highly renowned musicians. Many other organisations and performers also offer significantly reduced 'student rush' tickets to their live performance events.

4.2.4 Reasons for attending live performances

Participants were given eight different reasons for why they might choose to attend a live performance and were asked to indicate on a five point scale how each reason would influence them in their decision. Their responses, in descending order of mean, are shown in Table 14; it was not specified whether these were performances that participants had paid to attend.

Table 14: Level of agreement with reasons for attendance at live performances.

Reasons to attend live performance	**Min**	**Max**	**Mean**
For personal enjoyment	4	5	4.7
To learn standards of professional musicians	3	5	4.4
To broaden general music knowledge	3	5	4.3
To learn about stagecraft of performance	3	5	3.9
My personal enjoyment of concerts influenced by relevance to my study	2	5	3.9
Only for university requirements	1	2	1.9

N = 26

Survey 1, Question 9

The greatest factor influencing participants' decisions to attend a particular live concert was 'personal enjoyment,' receiving a mean of 4.7, which was the same as the response for listening to commercial recordings (see Table 11). In the case of live performance however, there was 100% broad agreement with this statement. A number of participants also agreed that their enjoyment of a performance was influenced by its relevance to their study. 'Personal enjoyment' was followed closely by listening 'to learn standards of professional musicians,' and to 'broaden musical knowledge.' Although some participants were neutral, no participant disagreed with listening for these reasons and both factors scored a mean above four. Learning about stagecraft was also generally agreed upon by participants as a reason to attend

live performances. There was 100% broad disagreement[23] shown amongst participants that when deciding on performance attendance they were least likely to attend a performance simply because it was a university requirement. This reason fell significantly below the others with a mean of 1.9; its maximum was only as high as the lowest minimum recorded for any of the other factors.

Participants were also given eight different reasons that might influence their decision not to attend a live performance and were asked to indicate in the same way how true each of the statements were (see Table 15).

Table 15: Level of agreement with reasons not to attend live performances.

Reasons to not attend live performance	**Min**	**Max**	**Mean**
Financial reasons	2	5	4.0
Other commitments	3	5	3.9
Dislike performer	2	5	3.8
Not interested in repertoire	1	5	3.4
Don't have time	1	5	3.1
Heard in performance before	1	3	2.1
I own a recording that I dislike	1	3	1.8
I already own a similar recording	1	2	1.3

N = 26

Survey 1, Question 10

[23] Broad disagreement occurs when all participants respond to a question with either strongly disagree or disagree.

The factor of ‘financial reasons’ was the most likely to influence a participant’s decision not to attend a live performance, followed closely by the performance clashing with ‘other commitments’ and a ‘dislike of the performer.’ Although the minimum shows that some participants disagreed that financial reasons would inhibit their attendance at live performances, the mean value of four for this reason indicates that the majority of participants did agree. The minimum and maximum values indicate the range within which the distribution of the participants’ answers lie. Participants’ answers show the greatest range of responses to the factors lack of interest and inadequate time; the mean close to four for these two factors indicate either a relatively balanced distribution of responses across the range of one to five, or a substantial number of answers of three. The most unlikely cause in preventing participants from attending a performance was ownership of a recording of the repertoire that was being performed. In fact, previous exposure to performance of the repertoire on offer did not deter participants from attending a concert at all and the three factors based on previous performance exposure fell substantially below the others in the degree of influence that they possessed. No participant agreed that previous exposure to the repertoire or performer in live performance, nor ownership of a similar recording, even one that was disliked, was a reason to prevent concert attendance. This reveals that listening to commercial recordings, even ones that are disliked, does not have a negative impact on the live performance attendance habits of participants. Indeed, dislike of a performer is significantly more likely to deter participants from performance attendance. Aural familiarity, whether positive or negative, is not likely to deter participants from attending live performances; in fact it is possible that aural familiarity encourages and increases the likelihood of attendance.

Overall, the participants of this study listened predominantly to recordings that were flute specific and related to their recital repertoire. A number of participants made a substantial

monthly commitment to obtaining music recordings and even those who did not spend money also listened extensively. Participants were predominantly influenced to listen to both commercial recordings and live performances for enjoyment and for reasons associated with supporting learning. As performance students many of the participants perform extensively themselves outside of their university requirements. Most participants regularly attended live performance events, although some participants did not utilize the free live performances made available to them for various reasons. The greatest deterrent of performance attendance was financial reasons; other commitments, dislike of a performer, or disinterest in the performance, were also substantial factors. These results establish that participants frequently use both commercial recordings and live performances as pedagogical tools, and that they generally have significant opportunities and means to engage in listening to enhance learning.

4.3 Assessment of performances

In an attempt to address the second research question–are there any differences in tertiary flute students' assessments of musical performances, whether listening to commercial recordings or live performances?–each of the three surveys included a listening assessment section. In the listening assessment sections participants were asked, while listening, to assess the two listening examples using assessment criteria reflective of that commonly used by assessors in performance examinations or auditions. Each participant completed a separate assessment for each of the two listening examples. The following discussion examines the participant responses to the listening assessments from both Survey 1 and Survey 2; as noted

earlier the Survey 3 tables have been omitted from comparison but have been included in the appendix.

The performer for Listening Example 1 was Geoffrey Collins, a member of both the Adelaide Symphony Orchestra, and the Australia Ensemble based at the University of New South Wales. Well known by the majority of Adelaide participants Geoffrey Collins was, by some, verbally idolised as the flute player they had listened to throughout their lives, particularly in live orchestral concerts. As an Adelaide based musician, for the Adelaide participants, it is possible that preconceived opinions of Geoffrey Collins' playing may have been based on previous extensive and frequent live exposure, although for the Melbourne participants familiarity may have been based predominantly on exposure to commercial recordings and few, if any, live performances.

By contrast, the performer in Listening Example 2, Alexa Still, is from the Sydney Conservatorium of Music and was relatively unknown to most of the Adelaide and Melbourne participants. It is possible that even participants with some aural familiarity of her playing may not have had extensive exposure to her in live performance; for most participants, exposure would possibly be limited to her performances at the Australian Flute Festival in Sydney, 2007.[24] The majority of participants' exposure to Alexa Still may have been from listening to her commercial recordings. Alexa Still has an extensive discography and has released at least fifteen recordings on which she is the soloist or featured artist. It became clear, through conversations between participants before and after the surveys, that most preconceived opinions about Alexa Still's playing were also possibly based on hearsay rather than on aural familiarity. Based on the demographics of the performers and participants'

[24] This would include at least a half of the participants.

written and oral testimonies, there was a greater possibility of Geoffrey Collins being known to the participants than Alexa Still.

When participants were asked, 'who are your favourite flautists to listen to?'[25] only two participants indicated Geoffrey Collins as a preferred artist and one indicated Alexa Still. Overall, the participants' answers included an obvious paucity of Australian flautists. Besides Geoffrey Collins and Alexa Still, the only other Australian artists named by participants were Sally Walker, Vernon Hill, Peter Sheridan, Janet Webb and Elizabeth Koch; only Sally Walker and Geoffrey Collins were mentioned more than once. The flautists preferred by the majority of participants were the international artists Emmanuel Pahud, Michael Cox, James Galway, Marian Gedigan and Jean Pierre Rampal.

Before completing Survey 1, participants were verbally asked if they had performed or previously heard any of the works from the listening assessments. The Richard Meale *Sonata for Flute and Piano* had not previously been performed by any participant and had been heard on recording by only one of the Masters students; incidentally, this had been the 1998 recording of Geoffrey Collins. None of the works by Schwantner had previously been heard or performed by any of the participants. Therefore, both listening examples were almost entirely unknown to all participants and, consequently, participant responses in the listening assessments were not likely to be influenced by aural familiarity. Although when listening to support learning students often have the musical notation in front of them, participants were not provided with scores during the listening assessments and were instead required to rely solely on aural skills. This was to allow participants to write while listening and prevent visual distraction and reliance on notation, especially as the questions sought a number of responses not related to musical notation. Looking through scores may also have been a

[25] Survey 1, Question 25, N=26.

distraction for both the performer and other audience members in the live performance (Survey 2) at the Australian Flute Festival. Whilst students often engage in listening to enhance learning with some prior aural familiarity and possible previous practice of the work, in this study, by chance rather than design, all participants were listening with almost complete unfamiliarity with the works and establishing new aural observations.

4.3.1 Listening assessment scoring

For each of the two listening examples in the listening assessment section, participants were required to award marks, on a five point scale with one being the lowest and five the highest, for fourteen separate technical and musical elements. These included: legato; staccato; other articulation; dynamics, tone quality, tuning, rhythm, musicality, style, expression, vibrato, breathing, phrasing, and ensemble.[26] Participants were also asked to give a mark out of five for the overall standard of the performance, whether live or recorded. The 'overall mark' allowed participants to include any other elements that they deemed important when assessing the standard of the recordings or performances. In presenting these results, for both of the listening examples in each survey, the mean result was calculated from the marks given for each of the separate fourteen elements and for the assessed overall standard. It was explained to all participants prior to completing the listening assessments that they were to assess the performances on standard alone, rather than on preferred playing style or repertoire.

[26] Technical elements include: legato, staccato, other articulation, dynamics, tone quality, tuning, rhythm, vibrato, breathing, and ensemble. Musical elements include: musicality, style and expression.

4.3.2 Listening assessment of commercial recordings and live performances

To identify participant assessment of commercial recordings and live performances, Table 16 presents the marks awarded by participants in the listening assessment of commercial recordings (Survey 1) and the listening assessment of live performances (Survey 2). Included in Table 15 are the minimum, maximum and mean results for the following: Survey 1, Listening Example 1, Richard Meale *Sonata for Flute* recorded by Geoffrey Collins; Survey 1, Listening Example 2, Joseph Schwantner *Soaring* and *Black Anemones* recorded by Alexa Still; Survey 2, Listening Example 1, Richard Meale *Sonata for Flute* performed by Geoffrey Collins; and Survey 2, Listening Example 2, Joseph Schwantner *Looking Back* performed by Alexa Still. From this table comparisons can be made between the results awarded by participants for the two listening contexts, commercial recordings and live performances, or between the two performers, Geoffrey Collins and Alexa Still.[27]

[27] For the results table from Survey 3, live recordings, see Appendix 8.

Table 16: Listening Assessment 1 commercial recordings and Listening Assessment 2 live performance.

	Commercial Recording Geoffrey Collins		**Commercial Recording Alexa Still**		**Live Performance Geoffrey Collins**		**Live Performance Alexa Still**	
	Min-Max	**Mean**	**Min-Max**	**Mean**	**Min-Max**	**Mean**	**Min-Max**	**Mean**
Overall	3.3-5	4.28	3.3-5	4.58	3.4-5	4.58	3-5	4.33
Legato	2-5	4.23	3-5	4.58	3-5	4.50	3-5	4.26
Staccato	3-5	4.13	1-5	3.77	3-5	4.14	3-5	4.37
Articulation[28]	3-5	4.43	3-5	4.53	3-5	4.33	3-5	4.41
Dynamics	2-5	3.64	3-5	4.38	3-5	4.04	3-5	4.04
Tone	3-5	4.52	3-5	4.31	4-5	4.67	2-5	4.17
Tuning	3-5	4.48	3-5	4.23	4-5	4.75	3-5	4.17
Rhythm	4-5	4.85	3-5	4.50	4-5	4.92	3-5	4.67
Musicality	3-5	4.36	3-5	4.58	3-5	4.54	3-5	4.54
Style	3-5	4.52	3-5	4.35	3-5	4.71	3-5	4.54
Express[29]	3-5	4.00	3-5	4.73	3-5	4.38	3-5	4.42
Vibrato	2-5	4.08	2-5	4.24	2-5	4.38	1-5	4.13
Breathing	4-5	4.81	3-5	4.56	4-5	4.75	2-5	4.46
Phrasing	3-5	4.19	3-5	4.64	3-5	4.71	3-5	4.54
Ensemble	3-5	4.08	4-5	4.45	4-5	4.83	3-5	4.48
	N=26				N=24			

[28] Abbreviation of other articulation.
[29] Abbreviation of expression.

In participant assessment of commercial recordings, both performers received the same minimum and maximum range for their overall marks; Geoffrey Collins' recording received a mean of 4.3, while Alexa Still's commercial recording was deemed by participants to be slightly higher overall with a mean of 4.6. There was some consistency shown in how participants awarded marks for the fourteen elements in each performance. The majority of elements were awarded a minimum of three, and all elements received a maximum of five. A noticeable difference was that the performers received higher results for contrasting elements. Alexa Still's commercial recordings were marked higher for eight elements and Geoffrey Collins' commercial recording ranked higher for six elements. Alexa Still's recorded staccato received the lowest, and only, minimum of one, despite also receiving a maximum of five. The greatest discrepancies of marks between the two performers were for the assessed elements of dynamics and expression, for both of which Alexa Still was awarded the higher mark. Comparable marks were awarded to both artists for style, other articulation, vibrato, tone, musicality, breathing and tuning.

In participant assessment of the live performances in Survey 2, the overall mark awarded for Geoffrey Collins was 4.6 while Alexa Still received an overall mark of 4.3. The minimum results that Geoffrey Collins received for the fourteen elements were spread almost evenly between three and four; he received only one minimum of two for vibrato in his live performance. Alexa Still was awarded mostly minimums of three, although she also scored a two for breathing and a one for vibrato. Again, both artists received a maximum of five for each of the fourteen elements and Alexa Still was again awarded the greater range of responses for her live performance. In participant assessment of live performance, Geoffrey Collins was awarded higher marks for nine of the elements and Alexa only received higher marks for three. The element which was marked most differently between the two artists live performances was tuning for which Geoffrey Collins received a mean of 4.75 and Alexa Still

received 4.17. There was no difference shown between the performers in the participants' awarding of marks for dynamics or musicality in the live performances and both artists received exactly the same results; a minimum of three, a maximum of five and a mean of 4.04 for dynamics and 4.54 for musicality. In addition to dynamics and musicality, the least difference in the award of marks for live performances were for phrasing, style, vibrato and all aspects of articulation.

In a general comparison of participant assessment of the commercial recordings and the live performances, Geoffrey Collins received a higher overall mark of 4.6 for his Survey 2 live performance, compared to his Survey 1 overall result of 4.3. Inversely, Alexa Still received a higher overall mark for her Survey 1 commercial recordings of 4.6, compared with her Survey 2 live performance which received an overall of 4.3.

4.3.3 Highest and lowest ranked elements in the listening assessments

Seen in Table 17 are the elements that participants marked the highest for all four listening examples. This table can be read in a number of ways: comparison can be made between either the two performers' commercial recordings from the top two boxes, or between the two performers live performances from the lowest two boxes. Comparison between Geoffrey

Collins' commercial recording and live performance can be seen in the two boxes on the left and comparison of Alexa Still's playing made from the two boxes on the right. [30]

Table 17: Listening assessments highest five ranked elements.

Survey 1 commercial recordings and Survey 2 live performances.

Commercial Recording **Geoffrey Collins** **Highest ranked elements** **Mean**	**Commercial Recording** **Alexa Still** **Highest ranked elements** **Mean**
4.85 Rhythm	4.73 Expression
4.81 Breathing	4.64 Phrasing
4.52 Tone/Style	4.58 Musicality/Legato
4.48 Tuning	4.56 Breathing
4.43 Other Articulation	4.53 Other Articulation

N=26

Live Performance **Geoffrey Collins** **Highest ranked elements** **Mean**	**Live Performance** **Alexa Still** **Highest ranked elements** **Mean**
4.92 Rhythm	4.67 Rhythm
4.83 Ensemble	4.54 Musicality/Phrasing/Style
4.75 Tuning/Breathing	4.48 Ensemble
4.71 Style/Phrasing	4.46 Breathing
4.67 Tone	4.43 Expression

N=24

Rhythm was awarded the highest marks overall of the fourteen elements, ranking as the highest element for both Geoffrey Collins' commercial recording and live performance and Alexa Still's live performance. There was little similarity in the elements that were awarded

[30] See Appendix 9 for the table of Survey 3 results for the highest ranked elements in the Listening Assessment.

the highest marks between the two recordings; only breathing and other articulation ranked in the list of highest elements for both. There was more similarity however, between the highest marked elements for the two live performances with rhythm, ensemble, breathing, style and phrasing all ranking in the list of highest elements for both Collins' and Still's live performances; albeit in a different order. There was also similarity shown between the assessment of elements for each performer's commercial recording and their live performance. This makes sense as the different listening contexts of recordings and live performances do not change what are essentially the strongest elements of a musician's playing.

A reason for disparity in the elements assessed most highly by participants may be due to the style of the repertoire and the predominant musical aspects of the different pieces. The Meale *Sonata for Flute and Piano*, is a more rhythmically regular piece and slightly less tonal than some of the Schwantner works. *Soaring* by Schwantner has particularly legato, smoothly contoured flute melodies and *Looking Back* uses some extended technique, such as flutter tonguing, tongue rams and speaking or singing while playing; although, all the pieces listened to by participants in the listening assessments generally used traditional flute playing technique. Geoffrey Collins' rhythm, breathing, tone, style and tuning were awarded high marks in participant assessment of both his commercial recording and live performance; while assessment of Alexa Still's recordings and live performance both displayed high marks for expression, phrasing, musicality and breathing. Greater consistency is shown between the results awarded to each performer, rather than those awarded to the two listening contexts; this may indicate that participants consider both artists to exhibit subtle differences in their playing styles.

Seen in Table 18 below is a comparison of the elements that participants awarded the lowest marks in Geoffrey Collins' and Alexa Still's commercial recordings and live performances. Although Table 18 represents the elements ranked the lowest by participants for the recordings and live performances, the distinction needs to be made that this does not mean that the marks received for these elements were necessarily low. The lowest ranked elements mostly have results higher than four, which indicates that across the range of responses participants predominantly awarded the performers marks of three and above.[31]

Table 18: Listening assessments of the five lowest ranked elements.

Survey 1 commercial recordings and Survey 2 live performances.

Commercial Recording Geoffrey Collins Lowest ranked elements Mean	**Commercial Recording Alexa Still Lowest ranked elements Mean**
4.19 Phrasing	4.35 Style
4.13 Staccato	4.31 Tone
4.08 Ensemble/Vibrato	4.24 Vibrato
4.00 Expression	4.32 Tuning
3.64 Dynamics	3.77 Staccato

N=26

Live Performance Geoffrey Collins Lowest ranked elements Mean	**Live Performance Alexa Still Lowest ranked elements Mean**
4.54 Musicality	4.37 Staccato
4.38 Vibrato/Expression	4.26 Legato
4.33 Other Articulation	4.17 Tone/Tuning
4.14 Staccato	4.13 Vibrato
4.04 Dynamics	4.04 Dynamics

N=24

[31] See Appendix 10 for the table of Survey 3 results for the highest ranked elements.

The three listening examples that shared the highest ranked element of rhythm, Geoffrey Collins' commercial recording and both Collins' and Stills' live performances, also share the same lowest ranked element of dynamics. Staccato and vibrato were also ranked lower than the other elements, appearing in the list of lowest elements for all four listening examples. In addition to sharing the lowest marked elements of dynamics, staccato and vibrato, Geoffrey Collins' commercial recording and live performance both received low marks for expression. The greatest similarity between listening examples in the lowest ranked elements is seen between Alexa Still's commercial recordings and her live performance. All but one of the elements which were ranked the lowest for Still's commercial recordings, staccato, tone, vibrato, tuning and dynamics, were also the lowest ranked elements for her live performance. This reveals that there is not a great amount of difference between participants' awarding of marks between Alexa's, or indeed either performers, playing on either commercial recording or in live performance.

4.3.4 Participant assessment of recorded and live performances

Overall, the marks awarded by participants for the listening assessments did not show any trend in the way that participants listened to and assessed either commercial recordings or live performances. For Listening Example 1 participants marked the live performance higher, however, for Listening Example 2 participants ranked the commercial recording higher. As there was no continuity in the marks awarded for commercial recordings or live performances, irrespective of performer, there can be no trend identified or real conclusion made about the way in which participants listened to and assessed either commercial

recordings or live performances. It cannot be determined whether the lack of consistency indicates that there is in fact no real or identifiable difference in the way that participants listen to these two different listening contexts, or whether the lack of any trend in participant responses is influenced by other factors. The results perhaps indicate that participant assessment was based on a combination of the listening contexts, performer and repertoire, rather than purely the listening contexts.

A real and identifiable reason for the participants different award of marks for the two live performances is that the two artists present very differently on stage. Live performance implies that the visual elements of the performance and the acoustics of the performance space have some impact on the aural experience. Alexa Still has a very unique and commanding stage presence and is flamboyant in her presentation, moving a great deal while performing. Geoffrey Collins on the other hand remains quite still in performance. As observed by the researcher, with a much more controlled stage presence Collins is commanding in an intently reserved way. This is a possible result of his long held position as principal flute in the Adelaide Symphony Orchestra, because within larger ensembles, there is less room for individual flamboyance and excessive movement.

Geoffrey Collins was ranked higher overall in participant assessment of the live performance and for both his commercial recording and live performance, Geoffrey Collins was awarded high marks of mostly four and five. As previously mentioned Geoffrey Collins is better known to the participants and has a positive reputation amongst them. Thus the assessment of his live performance may have been influenced in part–either consciously or sub-consciously–on this reputation. Alexa Still received a higher overall mark for her commercial recordings and participants showed a greater range of responses towards both Still's commercial recordings and live performance as she was awarded marks ranging between one

and five for both; although these were also predominantly four and five. The greater variance in participants' attitudes towards Alexa Still's live performance could be for several reasons. Alexa Still was both unknown and presented a flamboyant performance of a piece which included extended techniques. Therefore assessment of Alexa Still's performance might have been more open to influence by participants' personal tastes in repertoire, despite their having being briefed that assessment should be based on the performance and not on the style of repertoire.

There was some similarity shown between the elements which were awarded the highest and lowest marks for each performer and both performers ranked higher in different elements. Geoffrey Collins scored most highly in the areas of rhythm, breathing, tuning, style and tone; and least in the areas of vibrato, expression and dynamics. Collins, when compared to a many other professional flautists, has a distinctive, wide vibrato, which elicited very different responses amongst participants, in textual and verbal responses. That Collins' tuning and tone rated highly could be related to participants' perceived lack of dynamics in his playing. Geoffrey Collins' tone would potentially have maintained greater consistency as he was not extreme in his dynamic variation; either by choice or because the repertoire did not require it. Participant assessment that the level of Collins' expression in his live performance was not as high as the other elements could be linked with his high level of rhythmic control (almost metronomic) and low level of dynamic variation. As previously noted, in three of the listening assessments rhythm scored the highest of all the elements and for the same three examples dynamics was ranked the lowest. Rhythm, particularly when performing as part of an ensemble, is possibly considered by most performers as having greater importance than dynamics and would no doubt be a strong focus in performance preparation; particularly as part of a festival, where rehearsal time with the pianist possibly to have been limited.

Alexa Still, on the other hand, was awarded high marks in both surveys for expression, musicality and phrasing. Lowest ranked was Still's tuning, tone and, like Collins, her vibrato. Alexa Still ranked more highly overall than Collins in areas of character–expression, musicality, style and phrasing–playing to the extremes of the instrument to enhance character. This was also potentially a factor for the lower marks that Still received, in contrast to Collins, in the technical areas of tone and tuning, which may not remain as consistent when other aspects of playing are at their extremities. In a comparison of the two listening examples it can be seen that Alexa Still's live performance was ranked most highly in musical elements which are open to personal interpretation; whereas Collins' performance ranked higher in technical elements which can more easily be perceived objectively for the purpose of assessment and are less open to individual interpretation. Despite assertions in the literature by Day (2000) and Benjamin (1936) of the importance of aura and character in live performance, Still's live performance, which ranked highly in areas of character and musicality, was not marked as highly overall by participants as Geoffrey Collins' live performance, which ranked higher in the technical elements rather than musical elements.

This comparison brings to mind the comment made by Decca producer John Culshaw, who thought that the technical inaccuracies in performance which were forgotten in the excitement of the live performance event were revealed later in close examination of the recording (Culshaw cited in Day 2000: 52). Evidently for the participants in this study, technical accuracy is as important in live performance as musicality and expression; this is seen in the participant assessment of Geoffrey Collins' live performance, which ranked more highly overall and particularly in technical elements. On commercial recording, Geoffrey Collins was not marked as highly by the participants for musicality, style and expression as he was in the live performance. Despite assertions in the literature that character is lost in the recording process Alexa Still, on the other hand, was marked more highly for expression and musicality

on her commercial recordings than in her live performance which also was marked lower overall; her flamboyant style evidentially translates well on recording.

There could be alternative explanations for the differences, or lack of difference, between participant assessments of the listening examples in Surveys 1 and 2. For some participants, preference could simply be based on like, dislike or unfamiliarity with the performer or repertoire. For reasons of availability, funding and relevance, Geoffrey Collins' and Alexa Still's performances at the Australian Flute Festival, 2009, provided suitable listening examples for this preliminary project.

4.4 The influence of listening to enhance learning on students' attitudes towards learning repertoire, practice and performance.

To ascertain how listening to commercial recordings and live performances might impact upon tertiary flute students' attitudes towards the development of their own musical skills, a number of complementary survey questions were formulated to address the third research question: how does listening to live performances and commercial recordings impact tertiary flute students' attitudes towards learning repertoire, practicing and performing? Survey questions asked participants; their preferences for commercial recordings or live performances when listening to enhance learning; to what extent they emulated recordings; their self-perception of listening and its capacity to enhance learning and performance; their opinion of the motivational value of listening to both commercial recordings and live performances; the influence of errors in performance on their attitudes towards the performer

and themselves; and their preferred audiences for performance. When collated participant responses to these questions gave valuable insights into the influences and attitudes of listening to enhance learning and the performance skill development of tertiary flute students.

4.4.1 Listening to enhance learning

Listening to both commercial recordings and live performances allows students to become familiar with, to gain in-depth musical understanding of, and to emulate what they hear with, the goal of improving their own musical performance skills. In many cases the knowledge gained from such listening is applied directly to students' studies and subsequent performance of repertoire. Early in the development of recordings, Bartok saw the positive potentials of recorded music and recognised the role of recordings as pedagogical tools; he asserted however, that recordings could never replace the original performance (Williams 2004: 47). Studies by Philip (1992) and Day (2000) describe how the development of commercial recordings has influenced the way in which audiences listen and musicians perform. Williams (2004) focuses specifically on the influences that listening technology has on tertiary music students who listen to learn. Commercial recordings are used by tertiary music students for listening to enhance learning and this current study further addresses the wider implications that listening technology has on the student when listening to enhance learning.

There are benefits for the use of both commercial recordings and live performances in learning; both allow focus on different aspects of musical performance, providing diverse but complementary pedagogical tools. Participants were asked: 'when you are listening to learn

do you prefer to listen to recordings?' and 'when you are listening to learn do you prefer to listen to live performance?' the results of which are presented in Table 19. The slight difference in results can be partially attributed to the structure of the question, which asked participants to indicate separate preferences for both commercial recordings and live performances, rather than to indicate one single preference. Allowing participants to respond with their preference for both listening contexts on separate five point scales is beneficial because preference can be shown for both listening contexts for different reasons; however, it also limits the variance in results.

Table 19: Participants' preferences for commercial recordings and live performances.

Listening preference to learn	**Min**	**Max**	**Mean**
Commercial recordings	2	5	3.6
Live performances	2	5	3.4

N=14

Survey 3, Question 26 & 27

There was no significant preference shown by participants for either listening context when listening to support learning. Both listening contexts were awarded the same minimum of two and maximum of five, with very little difference between the mean results. Qualitative answers indicate a slight preference towards the use of commercial recordings as pedagogical tools for practical reasons and Table 20 includes a sample of participant responses representing the various views held.

Table 20: Qualitative responses to preference for listening to commercial recordings to learn.

Quantitative response	**Qualitative response**
Strongly Agree/Agree	‘Can re-listen to things to understand it better.’ Participant 41. ‘Commercial recordings are extremely useful in getting to know a work. Being able to listen over to the same performance is useful in analysing the positive and negative aspects of the interpretation.’ Participant 59. ‘Can go back over things again and again.’ Participant 17. ‘You get used to hearing the same thing and can stick in your mind then (it's a good and bad thing).’ Participant 50. ‘You can repeat! And pause etc.’ Participant 19. ‘If I am listening to learn I prefer to listen to commercial recordings in that I can listen to more interpretations from different flautists, (if referring to specific pieces that I'm learning).’ Participant 28. ‘Because they [commercial recordings] are more refined.’ Participant 37.
Neutral	‘It's not that I prefer it but I will do it as well.’ Participant 39. ‘Don't mind either way; a range is good.’ Participant 15.
Strongly Disagree/Disagree	‘I'd rather get the character from live performance and you can relate to it more directly.’ Participant 16. ‘I prefer to listen to commercial recordings after I have begun learning so I'm not influenced to play exactly like someone else.’ Participant 23. ‘Live performance communicates so much more, although commercial recordings are usually perfected and of an aurally higher standard. They're both good.’ Participant 34.

Participants who showed a preference for listening to commercial recordings for the purpose of learning did so because they could listen to a wider variety of performances repeatedly and also because commercial recordings provided a refined, more perfect musical representation of the repertoire (Participants 37 and 34). Participants, who were neutral, showing no preference for either listening context as a pedagogical tool, stated that this was because they liked a range of input from both commercial recordings and live performances. Participants who did not exhibit a preference for commercial recordings did not do so for two very different reasons. Participants 16 and 34 felt that live performances were easier to relate to and communicated more to them and Participant 23 preferred to establish their own interpretation before listening; this essentially does not show a preference for either listening context, but rather a preference not to listen in the initial stages of learning.

Qualitative responses to the question 'do you prefer to listen to live performances to learn?' (see Table 21) show that participants who prefer to listen to live performances to enhance learning, do so to learn the presentational aspects of performance, while also being aware of its practical limitations as a singular event.

Table 21: Qualitative responses to preference for listening to live performances to learn.

Quantitative response	**Qualitative response**
Strongly Agree/Agree	'Also useful in getting to know a work, plus the energy of live performance can be motivating. Also, listening to a live performance demands more concentration than listening to a recording, which is good when learning a piece.' Participant 59. 'It reminds you of a person's human condition. Everybody makes mistakes/slips.' Participant 15. 'I prefer to listen to live performances when I am trying to learn about aspects of performance (such as stage presence, communication with other performers and communication with audience) and also when learning improving specific aspects of technique as the visual helps with this.' Participant 19. 'Because they are more human.' Participant 28.
Neutral	'Not always what the performer meant to do. Sometimes things go wrong.' Participant 41. 'It's not that I prefer it but I will do it as well. However there are fewer opportunities to see a live performance of the pieces you play.' Participant 39.
Strongly Disagree/Disagree	'Live performances are harder to take in.' Participant 15.

Participants who preferred to listen to live performances for pedagogical purposes, indicated that the visual element of live performances creates an energy that is absent with commercial recordings. It appears that participants prefer live performances predominantly for learning aspects of performance presentation which commercial recordings cannot provide, such as audience communication and stage presence. Participants who were neutral to the use of live

recordings as pedagogical tools felt that 'sometimes things go wrong' (Participant 41) in performances and further, that there were limited opportunities to attend live performances relevant to their studies. Participant 39 suggests that relevance is determined by the repertoire being performed or instrument being played. However, any live performance by a professional artist or fellow student could be considered as a relevant performance to a tertiary musician. Any live performance offers tertiary music students invaluable exposure to different styles of music, stagecraft, audience communication and performance approaches. Broader attitudes concerning the relevance of live performance to tertiary studies among tertiary music students could potentially result in a greater desire to attend live performances and greater diversity in the style and genres of performances attended.

Participants who did not show a preference for listening to live performances stated that live performances were harder to take in for learning purposes than commercial recordings; this corresponds with the comments made by participants who preferred to listen to commercial recordings with a view to learning, for reasons of convenience and repeatability. Recordings can be stopped, repeated and once obtained, provide unlimited listening use. As Clarke describes, 'recordings allow a listener to repeat a gratifying experience, to hear again music played in exactly the same way' (Clarke 2007: 51) and for the purpose of emulation to enhance learning, allow listeners to check and continually repeat small sections as needed. The repeatability of recordings separates them from the context of live performances as recordings allow students to establish a familiarity with particular performance interpretations which is otherwise not possible when listening to live performances.

4.4.2 Emulating commercial recordings to enhance learning

The process of emulating commercial recordings refers to listening and then attempting to copy or reproduce elements of what is heard on the recording. The researcher sought to identify if and how tertiary music students emulate commercial recordings when learning repertoire and what influence this may have on students as listeners and learners. The accessibility and repeatability of recordings—as cited by participants in the previous section on listening to enhance learning and discussed in the literature review by Uidhir (2007: 302) and Clarke (2007: 51)—makes recordings highly functional pedagogical tools for emulation.

Tertiary music students use commercial recordings to establish familiarity with a broad and diverse range of repertoire and more specifically with repertoire related to their own ensemble and solo studies. To assist with their own stylistic interpretations when learning repertoire, most students are widely encouraged to listen to as many different versions of commercially released recordings of that repertoire as possible. Particularly when preparing repertoire or excerpts for auditions, exams and recitals, it is common for students to listen intently and often critically to a number of different commercial recordings, collecting various technical and musical ideas from each to emulate and to form their own interpretation. Williams (2004) describes how tertiary music students frequently listen to learn allowing themselves to become familiar with, to understand and to imitate what is heard.[32]

[32] YouTube also offers access to recorded videos of live performances which provide listeners with a visual element; often live and sometimes poorly recorded, these videos present a very different listening context which is not a focus of this study.

The following question sought to identify the issues associated with emulation. When asked 'do you try to emulate what you hear on recordings?[33] participants responded with 100% broad agreement: eight participants strongly agreed that they did, while six participants agreed.[34] Qualitative responses to this question included the following (see Table 22).

[33] Survey 3, Question 32, N=14

[34] This question also included the following statement: this does not mean do you imitate an entire interpretation of a piece by one artist, but refers to any imitation or culmination of various aspects from different recordings. Survey 3, Question 32, N=14.

Table 22: Qualitative response concerning participants' emulation of recordings to enhance learning.

Quantitative response	**Qualitative response**
Strongly Agree/Agree	'Emulate things you like about the commercial recordings - phrasing etc.' Participant 17. 'If I like what they've done. (usually listen to a couple of different commercial recordings though).' Participant 41. 'Take some aspects and ideas you like and add them to you own interpretation.' Participant 39. 'If I like something I hear, I will try to emulate it.' Participant 19. 'Sometimes I will culminate ideas, but mostly it's what works for me.' Participant 2. 'Yes, if I like their ideas I will emulate them.' Participant 15. 'If I like an aspect of a piece I will try and incorporate it into my own playing.' Participant 23. 'Not all aspects, but I will listen to interpretation ideas of various commercial recordings and use these to supplement my own ideas (or change if I decide my original interpretation is less effective) and also for specific elements of technique such as note length, vibrato, tone colours, etc. But I try to develop my own ideas and interpretation before listening to commercial recordings and use the ideas from commercial recordings in addition to my own ideas not instead of my own interpretation.' Participant 28. 'It helps me really gain an understanding of the piece. I like to pick bits that I like from each recording.' Participant 37.

It was broadly agreed upon by all participants that they listen to commercial recordings in order to emulate to some extent what they hear. The majority of participants however, particularly Participant 28, specified that while attempting to emulate what was heard on commercial recordings, emulation did not occur without discretion. Participants indicated selectiveness about the aspects of other performers' musical interpretations that they chose to emulate and to what extent any conscious emulation occurred, describing a use of commercial recordings to develop and supplement their own ideas rather than to emulate an entire interpretation of another performer.

4.4.3 The motivational value of listening

Studying music with serious intent in a tertiary environment involves significant personal commitment to practice and self critique outside of teacher input and supervision. Therefore motivation, as discussed by Schmidt (2005) in the literature review, is an essential aspect of skill development. Motivation promotes the quality and quantity of high level private practice required of tertiary music students and represents a significant factor in determining tertiary music students' attitudes towards their practice and performance. O'Neill and McPherson (2002) together with Hallam (2006) describe the complex dynamics between motivation, achievement and practice and how motivation and positive self-esteem are required for effective practice to occur. Commercial recordings and live performances of professional musicians epitomise the performance standards that many tertiary music students aspire to reach and the participants in this study broadly agreed that they use commercial recordings to enhance their learning and to emulate aspects of what they hear. As such, recordings should, in addition to being a learning tool, provide motivation for those studying music in a tertiary environment. As a commonly used pedagogical tool, particularly for emulation, the researcher

sought to identify if commercial recordings were considered motivational by participants. To establish continuity in responses, participants were asked in both Survey 1 and Survey 3 whether they felt motivated to practice after listening to recordings. The question in Survey 1 asked how motivated participants were after listening to the specific recordings in the listening assessments; this question did not differentiate between the two performers and was inclusive of all three recordings listened to. The question in Survey 3 however, concerned commercial recordings in general. In Survey 1, participants responded with 96% broad agreement and in Survey 3 with 86% broad agreement about the motivational quality of recordings (see Table 23). The difference in percentages is also influenced by the decrease in participant numbers.

Table 23: Participants' motivation levels after listening to commercial recordings and live performances.

Motivation after listening to commercial recordings	Min	Max	Mean
Survey 1	3	5	4.4
Survey 3	3	5	4.0
N = 26	N=14		
Survey 1 Question 30.a) & b)	Survey3, Question 23		

Despite the difference in participation numbers between the two surveys there is continuity in participant responses. Supportive of these results, the qualitative responses provided by participants in both Surveys 1 and 3 (see Table 24) concerning whether they felt motivated

after listening to commercial recordings were affirmative about the motivational value recordings provided.

Table 24: Qualitative responses regarding the motivational value of commercial recordings.

Quantitative response	**Qualitative response**
Strongly Agree/Agree Survey 1	'I realise how much further I've got to go.' Participant 33. 'Listening to professionals play really motivates me to achieve goals, mainly because if you can make your audience feel the same way you initially felt after hearing a recording you really like, you feel like you have musically achieved something.' Participant 59. 'Because it gives you ideas to try, highlights sections you need to work on, gives you a goal to go for.' Participant 80. 'After listening to a good recording you remember why you like the piece in the first place and what standard you hope to play at.' Participant 39. 'Fall in love with the instrument and want so much to achieve that sound myself.' Participant 24. 'Inspirational. Makes me want to work hard to get as good as them.' Participant 64. 'Mostly I find commercial recordings motivational, sometimes a little disheartening I realise how much more I have to learn and practice.' Participant 65.
Strongly Agree/Agree Survey 3	'Listening to recordings reminds me of what I love about making music, which is very motivating.' Participant 59. 'Give you idea for your own playing that you want to try out.' Participant 17. 'Yes, it makes me want to practice and improve so as to be able to perform to the level heard in the recordings, and also just to practice for enjoyment.' Participant 28. 'But I don't necessarily do more.' Participant 19.

	‘Pushes you to achieve same standard.’ Participant 15. ‘It inspires me to work harder and emulate techniques heard in recordings.’ Participant 31.
Neutral Survey 1	‘Not always because I don't sound as good.’ Participant 1.

Predominantly, commercial recordings provide participants with very positive and motivational pedagogical tools. Recordings were described by participants as being inspirational by demonstrating the possibilities of the instrument, giving them ideas to emulate in their own practice and goals to work towards. Several participants stated that listening to recordings reminded them how much they loved the repertoire they were listening to, their instrument and playing music in general. Notable responses were given by, Participant 59 who described wanting to create the same feelings they had felt when listening for their own audiences and Participant 19 who agreed that recordings were motivational but that they did not actually increase practice amounts.

All the participants in this study attempted to emulate aspects of commercial recordings and overall, are positively motivated to achieve the standard they hear. Participants 33 and 65 agreed or strongly agreed to feeling motivated to practice after listening to commercial recordings and their comments portray that motivation to practice comes from a desire to be better and closer in standard to what they hear. However, the qualitative responses of these two participants reveal an additional influence on their attitudes as listening to recordings also causes Participants 33 and 65 to feel negative about the standard of their own performance

levels in comparison. Therefore, their motivation to practice may not necessarily come from positive self-esteem, enthusiasm to practice or excitement about the recording or music.

Participants deemed live performances to be slightly more motivational than commercial recordings and in Survey 3, all participants broadly agreed on the motivational value of live performances, providing the following qualitative responses (see Table 25).

Table 25: Qualitative responses regarding the motivational value of live performances.

Quantitative response	Qualitative response
Strongly Agree/Agree	'I'm so interested - I want to learn about music more and provide the same experience for others.' Participant 33. 'I would like to have the same control of the instrument so that I could express my musical ideas more convincingly.' Participant 59. 'Yes, it helps me to keep my goals in focus and reminds me why I love playing and of what I need/want to improve in my own playing to reach that level of performance.' Participant 28. 'It reminds you that performances are why you play.' Participant 16. 'If someone else can do it than maybe I can to.' Participant 15. 'Heightens passion.' Participant 2. 'Want to be able to play like the performance.' Participant 64. 'Live performances are exciting! Makes you practice you improve your playing and be able to perform more.' Participant 17. 'See what works for other people and try those things out for yourself. Makes me want to strive towards achieving their sound etc. Doesn't make me upset that I can't play like them.' Participant 30. 'Always do after feeling the energy of performance.' Participant 2.

Similar reasons were given by participants for finding live performances motivational, such as creating an inspirational goal to strive towards (Participant 30). However, participant responses were overall more positive about the possibilities of achieving the goals epitomised by live performances than they were about those set by listening to commercial recordings. Again, participants alluded to the energy and presence that live performances possessed, describing the musical expression of a live performance as enhancing their live listening experience. As for the responses given by participants concerning the positive and negative impact of listening to commercial recordings and live performances, the quantitative responses for live performance cover a greater range. One reason for this might be that live performances contain visual elements that cannot be captured on recordings, such as audience communication which creates energy and heightens the listening experience through visual aspects and spontaneity. In live performances, however, there is also the potential for things to go wrong which may diminish some listeners' experiences; as explained by Participant 41 in Table 21.

4.4.4 Impact of listening on participants as performers

To establish further the impact of listening to commercial recordings and live performances on participants as students and performers, participants were asked to indicate on separate five point scales how positively they felt towards their own playing both after listening to commercial recordings and live performances. Also, they were asked to indicate on separate five point scales how negatively they felt towards their own playing both after listening to commercial recordings and live performance; with one being strongly disagree and five being

strongly agree to (see Table 26). As separate scales were used for positive and negative impact, participants could agree to feeling both positively and negatively impacted by either listening context.

Table 26: The effect of listening to commercial recordings and live performance on a participant's own playing.

Impact of listening on own playing	**Min**	**Max**	**Mean**
Commercial recordings impact my playing positively	3	4	3.9
Live performances impact my playing positively	3	5	3.9
Commercial recordings impact my playing negatively	3	4	3.8
Live performances impact my playing negatively	2	4	3.5

N=14

Survey 3, Question 22 & 23

Most participants indicated that listening to commercial recordings and live performances impacted their own playing in both positive and negative ways. Although there is very little

difference shown overall between the mean results for the positive impact of commercial recordings, the positive impact of live performances and the negative impact of commercial recordings. Each of these received an overall mean very close to four (agree). The negative impact of live performances was only slightly less felt by participants, receiving a mean of 3.5.

The positive and negative impacts of listening to live performance elicited a wider range of responses from participants. For commercial recordings, both the positive and negative impact felt by participants only ranged between three (neutral) and four (agree). For live performance however, participants' responses regarding positive impact ranged between three (neutral) to five (strongly agree) and for the negative impact, between two (disagree) and four (agree). The negative impact of live performances was the only impact that any participant disagreed with for this question.

The following qualitative responses were given by participants about the positive and negative impacts of listening to commercial recordings on their own playing (see Table 26) and show a greater variety of opinions that the quantitative responses.

Table 27: Qualitative responses regarding the positive and negative impacts of listening to commercial recordings on a participant's own playing.

Quantitative response	**Qualitative response**
Strongly Agree or Agree that recordings have both a positive and negative impact	'Commercial recordings can have either a positive or negative effect depending on the quality. A good performance [on recording] might be positive through being inspiring, but can be negative in that the results seem unattainable.' Participant 59. 'I am more aware of areas in which I am doing well and what I need to improve on.' Participant 34. 'It can be helpful but can also be damaging as one many not feel confident of their own playing.' Participant 50. 'Makes me more passionate about doing well on the piece but lets me see how far I have to go.' Participant 2. 'On one hand, it reassures me with things that I am doing well and inspires me to improve. On the other, it highlights the things I can do less well which can be slightly depressing.' Participant 19.
Strongly Agree or Agree that recordings only have a negative impact	'Commercial recordings are generally of playing at a higher standard than mine - highlights problems in my own playing which I concentrate on rather than positive points.' Participant 17. 'Can make you think I will never be able to play like that fast/short etc...' Participant 39. 'Can often be harsh when not able to replicate what is heard.' Participant 23.
Strongly Agree or Agree that recordings only have a positive impact	'Helps me to recognise strength and weaknesses of my own playing - makes me want to practice and reminds me what I love about playing music.' Participant 28.

A number of participants responded that listening to commercial recordings has both positive and negative impacts on their attitudes towards their own playing. The qualitative answers of these participants suggest that this is because commercial recordings not only make them aware of the strong aspects of their playing, but also make evident what they need to improve on; thereby sometimes diminishing a participant's confidence in their own abilities.

Similar qualitative answers are provided by participants who find that commercial recordings have only a negative and no positive impact; these participants also feel that recordings highlight the weaker aspects of their own playing and create feelings of inadequacy. When compared to those who feel both positively and negatively impacted by commercial recordings, the purely negative responses indicate that these participants do not recognise any positive benefit of listening to commercial recordings. Hallam's *expectancy component theory* (2006: 145) describes how effective learning is enhanced by a student's belief in their abilities to perform a task. If some participants believe, as their qualitative comments indicate, that the standard of performance set by commercial recordings is unachievable and makes their own playing under-standard by comparison, then they may not be positive about the outcomes of listening to enhance learning and the effectiveness of learning tasks are like to be diminished. O'Neill and McPherson's (2002: 32) *expectancy component theory* also describes that motivation relies heavily on students' self-efficacy, which in turn is reliant on the degree to which a student musician believes in their own ability and capacity to achieve the task.

Finally, some participants agree that commercial recordings have only a positive impact on their feelings towards their own playing and these participants similarly indicate that listening to recordings highlights their own weaknesses. These positive participants however, are not deterred by the high standards presented by commercial recordings but are instead enthused to do better, being positively inspired by the high standards they hear

Table 28 below indicates the qualitative responses provided by participants in responses to the positive and negative impacts of listening to live performances.

Table 28: Qualitative responses regarding the positive and negative impacts of listening to live performances on a participant's own playing.

Quantitative response	**Qualitative response**
Strongly Agree or Agree that live performances have both a positive and negative impact	'Most often live performances make me feel more positive towards my own playing, as the product seems more attainable (less 'perfect' than edited commercial recordings).' Participant 59. 'I know I'm not getting to that level so it's more enjoyment of the performance.' Participant 23. 'Shows aspects that I can improve on.' Participant 37.
Strongly Agree or Agree that recordings only have a negative impact	'I see things in other performances that are a higher standard than my own performance - don't really notice the things that are good in my own playing.' Participant 27.
Strongly Agree or Agree that live performances only have a positive impact	'It gives you an idea of things you can aim for while still recognising they're freaks who practice 100 hours a day.' Participant 16. 'It makes you want to see if you can try and achieve what the performer did.' Participant 39. 'Heightens passion, but sometimes depletes self respect in comparison.' Participant 2. 'Helps me to understand the importance of expression and good audience communication. Encourages me to practice and build on what I'm already doing.' Participant 28.

Participants who agreed that live performances had only a positive impact on their own playing were overall, motivated to try and emulate what they heard. Stagecraft, musicality and audience interaction, elements unique to live performances which obviously cannot be learnt from listening to a recording, were described by participants as being beneficial for learning live performance practices.

In comparison to the qualitative responses given for commercial recordings, participants who found listening to live performances to be a positive experience were less likely to also possess negative feelings about the high standard of the performers in comparison to their own playing. For example, Participant 59, who agreed that listening to live performances had both positive and negative impact on their own playing, also stated that the standard of live performances is more attainable than edited, near perfect commercial recordings.

Participants who felt negatively impacted by listening to live performances did so for similar reasons as those outlined concerning listening to commercial recordings; that is, their playing was highlighted as below standard in comparison to the performance. However, when compared to the responses concerning commercial recordings, there were less participants overall who stated this.

The qualitative comments provided by participants show much more variance in attitudes than the quantitative responses indicate. For live performances, participants' focus was more on aspects of enjoyment such as the passion of the musician in the performance and performers presence on stage. In response to these questions, the views expressed by the participants reveal that commercial recordings and live performances, for different reasons, both possess a predominantly positive impact on their attitudes towards practice.

4.4.5 The Influence of errors in live performance

The primary element that makes live performances different from recordings is, as discussed in the review of literature, that they are singular events occurring in real time (Uidhir 2007: 302). Real-time is described by Gracyk as performance 'in the presence of an audience, for that audience' (Gracyk 1997: 140), there is only one chance in live performance and nothing can be redone or undone (Day 2000; Philip 2004). Philip (2004) makes comment on the expectations of the listener that might arise from listening to recordings where editing techniques can potentially eliminate any mistakes or musical errors. The continued development of editing in the recording process has, Philip believes, allowed attitudes concerning musical accuracy to be greatly altered and musical imperfections to become less and less acceptable on finished recordings and in the concert hall.

Several questions were asked of participants to establish any influence that the real-time element of live performance may have on their attitudes towards their own playing standards. Participants were asked 'how do you feel towards your own playing when a performer makes a musical error?' and 'how do you feel towards a performer when they make a musical error?' Each participant was required to indicate on a five point scale to what degree errors in performance elicited positive and negative feelings towards both themselves and the performer; with one being strongly disagree and five being strongly agree (see Table 29).[35]

[35] It was not defined by the researcher what a 'musical error' was and it was consequently left to each participant's own personal judgement of what a 'musical error' in performance was considered to be. It was implied, although not explicitly stated, that the context was a live performance.

Table 29: How participants feel towards their own playing and how participants feel towards the performer when the performer makes a musical error.

Feelings when a music error occurs	**Min**	**Max**	**Mean**
Feel negative towards own playing	2	3	2.9
Feel positive towards own playing	2	5	3.5
Feel negative towards performer	1	4	2.8
Feel positive towards performer	2	5	3.3

N = 26

Survey 1 Question 31 & 32

None of the participants felt negative towards their own playing when a performer made a musical error; feelings of negativity towards one's own playing only scored a maximum of three (neutral) and a mean of 2.9. Comparatively, the highest results were given for the positive impact felt towards a participant's own playing in the event of a performer making a musical error, scoring a maximum of five (strongly agree) and a mean of 3.5. Participants provided some of the following qualitative responses with regards to how they felt towards their own playing when a performer made a musical error (see Table 30).

Table 30: Qualitative responses regarding how participants feel towards their own playing when a performer makes a musical error.

Quantitative response	**Qualitative response**
Agree to positive influence on own playing	'It is reassuring that no performer can achieve perfection and it makes me realise that my own errors are usually insignificant.' Participant 59. 'It reminds us that at the end of the day we are all human and must allow for minor technical slip ups.' Participant 50. 'No one can be perfect, but I do feel sad for them if it's a bad mistake.' Participant 2. 'It depends on the situation - sometimes it helps me feel better about my playing because it reminds me that other people make mistakes too.' Participant 65. 'Everyone does it. Makes me want to practice more.' Participant 23. 'It's nice to know they're human too, and I've realised that we're aiming for excellence over perfection.' Participant 34.
Neutral to any positive or negative influence on own playing	'I like it when performers make mistakes because I can relate to that and so I connect with the music more and understand everyone's human!' Participant 16. 'I make mistakes all the time. However it does make them seem more human and more possible to emulate.' Participant 19. 'Everyone makes mistakes.' Participant 17.

> ‘Everyone makes mistake, so just because they do, doesn't mean I'm any better or worse than them, my playing will still be the same.’ Participant 39.

> ‘It depends; sometimes if they are small mistakes it helps me to keep my own playing in perspective, at other times it's irrelevant to my own playing (depends on the context of what the mistake is).’ Participant 28.

Participants who agreed or strongly agreed to feeling positive towards their own playing when a performer made a musical error, explained that this was because hearing another performer make mistakes in performance reassured them that as humans, we are not perfect. Errors in performance demonstrate to participants that mistakes are inevitable, allowable and insignificant. Participant 23 even expressed a desire to intensify practice after hearing another performer make a mistake and Participant 34 made the insightful and positive remark that musical errors made them realise that ‘we're aiming for excellence over perfection;’ similar to Kohn’s (1987, November) contention that competence is more important than winning. Several participants also described feelings of sympathy for the performer who had made the error, qualitative comments support participants identifying with feelings that they had experienced when making an error in performance themselves. The majority of participants who indicated neutrality in regards to any negative or positive impact that musical errors might have on their feelings towards personal playing standards, generally stated that this was because everyone makes mistakes. However, some participants who were neutral in their quantitative answer stated positive influences in their qualitative responses. Participants 16 and 19, who were neutral, specifically stated that mistakes in performance allowed them to

relate better to the performer and caused them to view emulation of the performance standard as more achievable. As identified in the previous section concerning participants motivation to practice, learning outcomes which are viewed as achievable by student musicians, are described in Hallam's second expectancy value component (Hallam 2006: 145) as having positive motivation on students self-efficacy and attitudes towards practice. Some of the qualitative responses given about participants' feelings towards the performer who had made a musical error are shown in Table 31.

Table 31: Qualitative responses regarding how participants feel towards a performer when the performer makes a musical error.

Quantitative response	**Qualitative response**
Agree to positive influence towards performers	'Unless they're professional (e.g. MSO) player, and really aren't the standard you'd expect.' Participant 16. 'Very good as it makes them seem more human.' Participant 19.
Neutral to any positive or negative influence towards performers	'It is nice to sometimes discover that they are human.' Participant 59. 'Everyone makes mistakes, especially when performing due to nerves.' Participant 17. 'Then it's obvious they still have room to grow, which is not a bad thing.' Participant 2. 'Qualitative answer selected. I don't look down on them; great musicality and a beautiful tone override that.' Participant 23.
Agree to both positive and negative influence towards performers	'I sympathise with them if it is a minor issue. However one can feel very unsettled in the fact that someone is playing badly and is technically incompetent.' Participant 50.
Agree to Negative influence of performers	'I normally feel sorry for a performer because I can relate to how they feel and tend to feel nervous for them.' Participant 65.

The greatest impact on participants when a performer makes a musical error is to feel marginally more positive rather than negative, both towards oneself and the performer. This indicates that errors in performance do not have a significant positive or negative influence on the way the performer is viewed by the listeners. There was general agreement that everyone makes mistakes and that participants empathise with the nerves associated with live performance. The positive comment made by Participant 23 was that in performance, good musicality and tone are more important than any error. Participant 50 identified the difference between a simple musical error and an incompetent player performing badly; this participant perceives the overall quality of a performance or performer to be discernible, either regardless of or inclusive of the presence of musical errors.

Participants' quantitative responses indicate that they are almost neutral about the influence of musical errors in performance. However, participants' qualitative responses indicate that musical errors do have some discernible positive impact on their attitudes towards personal playing standards. In accepting the reality of mistakes in performance, positivity rather than negativity is slightly more likely to be felt by participants, personally and towards the performer. The positive results are not significantly higher but there are more participants agreeing overall and at a higher level. Participants' positive responses concerning the impact of mistakes in performance on their own their playing standard, may have possible further implications for participants, both as listeners and performers. The most negative comment was made by Participant 16 who believed that mistakes were permissible to make in performance, but not for a professional, in which case, any mistake is not what the audience should expect from a professional performers, this response indicates an expectation of perfection from professional standard performers. If participants are exposed to musical errors in performance as listeners, they may feel that professional performance standards are more achievable and may also be more accepting of musical errors in their own performances and

feel less pressure to perform perfectly. Live performances will present to participants more mistakes in performance than edited commercial recordings.

4.4.6 Participants' preferred audiences in live performance

In music education, loss of effectiveness and hindered progress through negative feelings do not improve learning outcomes or performance levels. Competitiveness, as discussed in the literature by Kohn (1987, November), Miller (1994) and Austin (1990), is associated with musical education through auditions, eisteddfods and sometimes recitals, masterclasses or flute workshops. Competition has the potential to motivate students to perform better but also to impact negatively on participants' attitudes towards personal playing standards, by diminishing confidence levels. Participants who feel negative towards their own playing standard may prefer not to perform to an audience of a higher standard, an audience that they might feel to be critical. Participants, who are themselves critical of the standard of their peers, may also expect their own audiences to be similarly critical in their attitudes. To gauge whether participants were more comfortable performing for an informed specialist audience or a sympathetic audience, they were asked: 'would you prefer your audience to be made up of flautists, other music students, or non-musicians?' Participants were asked to select for each type of audience, their level of preference on a five point scale, with one being strongly disagree and five being strongly agree. Table 32 shows that the majority of participants were in favour of performing for audience members who were not flute specialists

Table 32: Participants' preferred audience members

Preferred audience	Min	Max	Mean
Non-musicians	3	5	4.4
Other music students	2	5	3.5
Flautists	2	5	3.3
Higher year level	1	5	3.1

N=26

Survey1 Question 23 & Question 28

Non-musician audience members were clearly preferred by participants overall with a mean of 4.4; no participant disagreed that non-musicians would make a preferable audience. Other music students were preferred second with an almost neutral mean of 3.5 and flautists last with a mean of 3.3. Participants were also asked 'do you feel less comfortable playing for students of a higher year level than you?' (included in Table 32). Responses to this question cover the entire possible range from one (strongly disagree) to five (strongly agree) with an almost neutral mean of 3.1; indicating that there was an almost even spread of participant responses between the minimum and maximum values and a substantial difference in participants' opinions, or a large number of participants who selected three (neutral). The following qualitative responses in Table 33 support participants preference for a non specialist, or sympathetic, audience.

Table 33: Qualitative responses regarding participants' preferred audience members.

Quantitative response	**Qualitative response**
Preference for audience of non-musicians	'Fairly used to playing in front of either flautists or music students so it's ok, although I know they can be more critical. Non musicians are best to play in front of because they don't know the music there's less pressure to get everything perfect.' Participant 39. 'Flautists are particularly critical towards other flautists, especially in Australia.' Participant 59. 'Not too particular about audience member however I do like a mix between acquaintances and friends.' Participant 7. 'Others who knew less.' Participants 23 & 19. 'Other music students.' Participants 21, 33, 43 & 30.
Preference for flautists or other music student	'Having flautists listen to a performance is helpful but can be quite daunting, whereas I love to just perform for people who love music, not just people who may criticize it - although sometimes that is also good.' Participant 37. 'Flute students can give comments about specific aspects of technique and others about musicality interpretation etc.' Participant 28.
No Preference for any particular audience	'I enjoy having flautists present as they have helpful advice however other musicians are less critical whilst still having the same musical appreciation.' Participant 65. 'I don't really mind, just as long as they enjoy the music.' Participant 80.

Overall, participants preferred to perform for audiences who knew less about flute performance rather than to other flute players. Congruent with this are the responses in which participants were ambivalent about performing for other flute players, especially playing for musicians of a higher year level than themselves. Even participants who preferred an audience of flautists, such as Participant 37, also felt that performing for other flautists was daunting. Several participants in their neutral responses showed no definite preference for any particular audience members and while they still viewed an audience of flautists as critical, they saw the benefits that this could provide them, through constructive criticism and performance feedback.

4.5 The expectations that editing on recordings creates for listeners

Since the beginning of recording, 'illusion was always the point of recordings', and one cannot accept any recording, early or recent, at face value as 'real' (Philip 2004: 26). As established in the review of literature, editing is accepted as standard practice in the recording industry and considered by authors, educators and performers to have influence on both audiences and musicians. As Philip indicates, the truthfulness of recordings as documents depends entirely on the context of their production; when and how they were made, the limitations present and the approaches used. As a result of the sophisticated nature of today's digital recordings, the illusion of a continuous performance can potentially be created by multiple takes and editing techniques (Philip 2004: 43). As Janos Starker stated, 'the recording studio provides me with the chance to play something again if I don't like it' (Harvith and Harvith 1987: 189). The possible use of editing techniques to create near perfect

recordings that cannot be replicated in live performance potentially sets unprecedented and increasingly high performance expectations for performers and audiences. In light of the issues regarding near perfect recordings, the following discussion seeks to answer the fourth and final research question: does listening to commercial recordings have any impact on tertiary flute students' attitudes towards listening to live performances?

Discussion of results from this study has already established that participants listen to commercial recordings to emulate what they hear, to understand repertoire better and to develop interpretations for personal performance. This study has further identified an inclination for participants to prefer commercial recordings for listening to learn, predominantly for the reasons of repeatability and accessibility and further, that listening to commercial recordings has an overall positive motivational influence on the practice habits and attitudes of the participants. Commercial recordings have also been described by participants as presenting standards that are unattainable, potentially invoking feelings of inadequacy in a participant's own standard of playing. Errors in musical performance however, have been described as having a slightly positive influence on participants' attitudes towards their own playing and these remind participants that mistakes are inevitable and an accepted aspect of live performance conditions, the presence of errors in performance are likely to have some positive influence on participants' attitudes.

Listening to commercial recordings as pedagogical tools influences participants' attitudes towards playing and learning and consequently, the possible influences that the editing of recordings may have on the way that participants listen and approach performance is also of relevance. To discern their opinions of editing on commercial recordings, participants were asked: 'do you think that listening to commercial recordings that have had the mistakes edited

out changes the way you listen to live performance?'[36] The majority of the participants, ten, broadly agreed with this statement, three participants were neutral and only one participant disagreed.[37] Previously the term 'edited' was not used in any of the surveys so as not to lead the participants into thinking about recordings as edited performances; rather, it was left to the participants to comment on editing if they felt it was pertinent. In their qualitative responses to this question (see Table 34), participants cited various reasons for their opinions, most acknowledging that editing on commercial recordings had both a positive and negative effect on their attitudes towards live performances. All the qualitative answers given by participants to this question have been included in Table 34.

[36] Survey 3, Question 35, N=14.
[37] It should be noted that previously the term 'commercial recordings' was used, however, in reference to this question, the term 'edited recordings' will be used in the following discussion so as to follow the wording of the question.

Table 34: Qualitative responses given by participants concerning whether listening to edited commercial recordings influences the way in which they listen to live performances.

Quantitative response	Qualitative response
Strongly Agree	'It gives me higher expectations in the performances, perhaps unrealistic expectations.' Participant 19. 'It gives us higher expectations of performance in general. What we used to think was an awesome performance live, is now overshadowed by the perfect commercial recordings we listen to … [commercial recordings] can lose individuality when something is edited out. You will compare it [performance] to a recording at home and think less of the brilliant performer in front of you.' Participant 41. 'We get attached to how an artist sounds on a recording and then set high standards on ourselves and it can be too much to deal with.' Participant 50. 'I'm slightly more shocked when I hear live mistake but if their playing is imaginative and musical and exciting I don't really care. I would rather the performer take risks and make occasional mistakes than to play it safe and boring.' Participant 34. 'Although I realize that commercial recordings have been edited, it still creates an unrealistic ideal to aspire to. It means that I am less forgiving of technical inaccuracies in live performances, and also expect more in terms of tonal production and dynamic range.' Participant 59.
Agree	'It's easy to forget that mistakes are often part of the performance, and so we lose focus of how to deal with performing when we're not perfect.' Participant 16. 'It makes a live performance seem less polished, when we all know mistakes happen.' Participant 23. Sometimes this can lead to unrealistic expectation of the performer in live performances. I think that often when commercial recordings have mistakes edited out (not always though) the vitality of the performance is lost. Particularly, when multiple takes and continuous recording of small sections minimizes the artist's musical involvement in the performance.'

	Participants 28. ‘When the performer takes multiple times to produce one piece on a CD, it doesn't give the right impression about flute playing to the listener. Then, when you go to listen to a live performance, your 'hearing' is blurred and it's not what you expect. Commercial recordings without mistakes tend to cloud your vision about actual flute playing and not a series of edited pieces.’ Participant 37. ‘It affects the listener more when they hear a mistake from a live performance because they are used to hearing perfect playing on a CD. But personally, I am aware of that and know that everyone makes mistakes. It's not realistic to think that we can play perfectly every time because it's not human!’ Participant 15.
Neutral	‘I don't actually think about that or take any notice of commercial recordings that have been edited or not, so I don't think it changes the way I listen.’ Participant 39. ‘Listening to commercial recordings gives you a certain expectation of the performer; however you need to remember that mistakes are edited out of commercial recordings.’ Participant 17. ‘Live is Live, it's an energy that won’t get on a CD, you go for the musical energy aspects, not to hear perfection.’ Participant 2.
Disagree	‘Possibly makes me expect more from the live performance. Such as: for it to be technically perfect like the recordings. Other than that I don’t feel that there is a change. At a live performance, you know it is live and will generally be more accepting of the small technical mistakes to gain the extra energy of a live performance as opposed to recordings.’ Participant 64.

The conviction with which most participants responded to this question clearly demonstrates that this area of focus is of direct interest and a keenly felt issue among those studying their craft with serious intent in a tertiary environment. Most participants stated that editing on

recordings influences the way they listen to live performance and that they are less forgiving of technical mistakes in live performance because of the near perfection that edited recordings present.

Participants 59, 28, 37 and 15, who agreed or strongly agreed that they were influenced by editing on commercial recordings when listening to live performance, also displayed a basic awareness of editing on commercial recordings and therefore one would expect that these participants possess some expectation that imperfections are a part of live performance. Qualitative responses indicate various levels of awareness among participants about the editing techniques used on recordings; the influence of editing on recordings nevertheless has the potential to exceed existing awareness. Limited knowledge of editing does not allow participants to identify the entire spectrum of ways in which they may be influenced when listening as uninformed listeners. For example, Participant 37 states that the way they listen to live performance is influenced by the possibility for performers to perform multiple takes when recording. Participant 37 may potentially be influenced by many other aspects of editing techniques that surpass current awareness. Awareness does not preclude influence and despite showing a basic knowledge of sound editing, participants' qualitative answers indicate little awareness of the degree and potential scope of editing techniques.

Neutral Participant 15 is the only one who indicates that in being aware of editing on recordings, it is therefore unrealistic to expect perfection in live performance. Participant 2 who is also neutral to the influence of editing, recognising that edited recordings are an entirely different listening context to live performances. Similarly, Participant 17 is neutral towards the influence of commercial recordings indicating an engagement with informed listening, however, despite being neutral also states that listening to edited commercial recordings creates certain expectations of performers in live performance. This comment does

not demonstrate an absence of influence from editing on recordings but does demonstrate an awareness of the influence of editing. In comparison, although Participant 39 is neutral to the influence of commercial recordings, this participant's comment indicates neutrality because editing has not been thought about; non-identification of influences does not indicate an absence of influence but rather an unawareness of possible influences. Participant 39 may be an uninformed listener who is not aware of production standards of the recordings to which they listen.

As Participant 40 earlier indicated, errors in live performance create a sense of 'relief' that mistakes are acceptable, which raises possible implications that a greater awareness of editing might have on student learning. If participants who emulate what they hear on recordings, also feel these recordings to be of an unachievable standard, then participants who are more aware of the possibilities and presence of editing on recordings, might be similarly relieved that the near perfection of edited recordings does not portray a genuine professional reality.

Chapter 5: Conclusion

This study aimed to investigate participants' listening habits to commercial recordings and live performances, with a view to establishing how listening to enhance learning might moderate the attitudes of students as performers and listeners. This study is essentially, an introduction to further exploration in understanding the listening habits that influence learning advanced music performance skills. While this study involved a small group of participants, the results provide sufficient evidence to highlight the possible influences and motivations associated with listening to enhance learning. As a study that explores the relationship between students' use of various listening contexts to enhance learning and the development of performance skills, the findings and issues raised are of potential relevance to both the current literature on music recording and advanced music education. Of significance is the conclusion that neither listening context is superior, as both provide pedagogical tools for specific and complimentary areas of musical performance development, and further, any listening to enhance learning has the potential both positively and negatively, to influence tertiary music students' attitudes towards learning outcomes.

Regular use of personal listening devices occurred amongst all participants, with the majority of participants owning and frequently using the most up to date technology. *Naxos* is participants' preferred recording label, possibly influenced by the availability of *Naxos Online* which is easily accessible and free to use. Most recorded music to which participants listen is related to university recital repertoire. Overall, a broad range of music is listened to by participants, however, not to the same extent as repertoire that is instrument specific. Regarding monthly expenditure on recordings, the majority of participants are represented by two groups—those who either spend twenty to thirty dollars on recordings per month and

those who spend none at all. A larger number of participant responses to both these monthly expenditure values may be due to the ease of downloading music online from home; MP3 music can easily be downloaded for free or purchased on iTunes. Single pieces, rather than complete CDs, can also be purchased on iTunes, allowing listeners to download selected works from any CD.

Participants' primary reason for engaging in any listening, whether to commercial recordings or live performance, is for enjoyment. General enjoyment of listening is beneficial for participants' use of commercial recordings and live performances as pedagogical tools to enhance learning. As listening to music is associated primarily with enjoyment, it translates that participants are also likely to enjoy any listening in which they engage. General enjoyment associated with listening could stimulate more frequent listening for other reasons and invoke a greater enjoyment of music listened to for learning purposes. It is feasible that enjoyment of listening to music encouraged initial learning of music or the desire to extend music studies. Some participants were neutral to listening to commercial recordings for enjoyment, however all participants in this study indicated that they listened to live performances for enjoyment purposes.

Purchasing or listening to a recording does not require the same effort or investment of time and finances. Commercial recordings can be paused and listened to at one's leisure numerous times after purchase; listening to a recording can occur in the comfort of the listeners own home. However, live performances are singular events in a particular time and place; they cannot be repeated or listened to while engaging in other activities; for this reason live performances require additional investment of time, money, effort and focus. Therefore, listening to a commercial recording may not require the same level of enjoyment expectation; if there is little enjoyment experienced in listening to a recording, there is minimal loss at that

time. This may be one reason why all the participants in this study broadly agreed that they attended live performance for enjoyment. The additional investment required to attend a live performance suggests an enhanced expectation of personal enjoyment.

With greater opportunities available to listen to recordings and with less intentionality required for listening to recordings, a greater percentage of recordings listened to may not be those most enjoyed or preferred by participants. Attending live performances requires additional investment beyond listening to recorded music and consequently, may retain the novel element of hearing an artist live for the first time; when compared to the possible greater level of exposure and familiarity that participants are able to have to an artist or a particular work on recording.

In addition to enjoyment, contrasting preferences were given by participants for engaging in listening to recorded or live music. Participants' secondary reason for attending a live performance was to learn aspects of performance that could not be learnt from listening to commercial recordings, such as audience communication, musical character and stage presence, rather than stylistic interpretation. It is encouraging that the predominant reasons given by participants for deciding not to attend live performances were financial reasons, other commitments and lack of time; evidently participants will attend performances they are interested in if they have the means and opportunity. Also, aural familiarity is not a deterrent to participants' desire to attend a live performance. Even after previous hearings of a work, including ones that were disliked, participants recognize the value of different performances and interpretations of that repertoire. Deterrence from attending a live performance may stem from practical and logistical reasons rather than musical reasons. A question emerges from these results: Does participant preference for a listening, recorded or live, context correspond with the listening context used most frequently by students to learn? Participants may prefer

the use of one listening context over the other to support learning, but may not have sufficient opportunities adequately, to access their preferred listening context. Ready access to *Naxos Online* reduces any financial requirement for listening and therefore the accessibility of commercial recordings has the potential to make these recordings more commonly used than live performances as a practical learning tool.

Participants' secondary reasons for listening to commercial recordings were to broaden musical knowledge and to engage in learning. However, as a single event which cannot be listened to repetitively and which has limited accessibility and availability of study-specific repertoire, the viability of live performances and their convenience as pedagogical tools is restricted. For practical reasons, commercial recordings are more accessible for study purposes and provide access to listening material that has perceivably greater relevance to study specific repertoire, as well as multiple interpretations of repertoire performed by different musicians.

From the results of this study, there appear to be no real differences between the way that tertiary flute students assess commercial recordings and the way they assess live performances. The results of the listening assessments in this study however, highlight that additional elements of performance, such as stage presence, do play an important part in participants' perceptions of the standard of a live performance. It is also seen that the presence of a performer's personality and character is considered to be an important and an identifiable aspect of listening to commercial recordings. The human elements of live performance and stagecraft are the most prevalent reasons given by participants who prefer live performances for learning purposes. Although the human elements of live performance are visual performance elements rather than aural ones, it is not determined in this study to what degree visual elements have musical effect on the aural elements of the music. When listening to

enhance learning, repeatability and convenience influences students' decisions and in many instances influences a participant's choice of listening context for use to enhance learning.

To varying degrees, all participants attempt to emulate what they hear in recordings but do not necessarily imitate entire interpretations. Being used to enhance learning, commercial recordings and live performances both possess positive and negative influences on participants' attitudes towards their own performance standards and provide highly motivational pedagogical tools. The participants of this study derived substantial positive motivation from both commercial recordings and live performances, yet participants' reasons for motivation were quite different between the two listening contexts. The tertiary flute students in this study derived motivation to practice from a desire to be better and closer in standard to what they heard on commercial recordings. Motivation derived from live performance was more likely to generate a positive attitudes and excitement about the possibilities of reaching a performance standard, by contrast to some of the affects derived from recordings; such as loss of self esteem and feelings of inadequacy in personal playing standard. Recordings provide some participants with an ideal to be emulated, inspiring harder work, while other participants found recordings disheartening as their own personal playing standard did not match these examples. For some participants, live performances were more about experiencing and understanding the expression of the music that also provided a more achievable standard to aim towards, than the level set by commercial recordings.

The presence of musical errors in live performance did not generally diminish participants' perceived standard of the performance. Errors in live performance demonstrated to participants that mistakes in performance are allowable and acceptable. For this reason, live performances instead of commercial recordings had a more positive influence on participants' attitudes. Participants showed substantial preference for non-specialist audiences over

knowledgeable audiences, indicating that competition in a tertiary environment is not always supportive nor enhances positive attitudes towards performance. A further conclusion that may be drawn is that participants expected their peers to be critical audiences and performance experience in tertiary environments may not always be positive or encouraging; consequently tertiary environments could focus more on competence rather than competition.

Both edited recordings and live performances are invaluable in tertiary music education and for different reasons provide students with effective learning tools. For their accessibility and repeatability, recordings offer tertiary flute students listening possibilities that performances cannot. Both listening contexts are beneficial in their own ways, however they are very different and as the results of this study suggests, they impact on students in various ways, possessing different motivational weightings and inadequacies. Although the number of participants in this study was too small to present conclusively how tertiary flute students are impacted by listening to commercial recording and live performances in learning, there are significant differences in the impact live performances and recordings can have on participants' attitudes. This study exhibits some interesting results from a particular study group, indicating that further examination of tertiary students' listening habits as a unique group of listeners could be of significance in tertiary education. An intentional educational approach to learning by listening to live performances and commercial recordings would not be difficult to implement in practice: significant expectations of greater attendance to live performance; engaging in informed listening and greater discussion about the reality of different listening contexts, live and recorded. Essentially, neither listening context is superior, as both provide pedagogical tools for specific and complimentary areas of musical performance development.

There are some limitations to the findings of this preliminary study and further extension is needed in order to more fully understand how tertiary music students use commercial recordings and live performances to enhance learning and develop their attitudes towards practice and performance. The constructs studied here are suggestive for future research; the results indicate that further study may yield important information for music educators in addressing the diverse influences associated with listening to enhance advanced music performance education. Based on these results, further research appears warranted in order to determine how the use of commercial recordings and live performances, along with other types of listening experiences, can be employed most effectively as pedagogical tools.

Future investigations in this area could extend sampling to include greater variance in instrumental groups, so determining whether these issues are relevant to all instrumental students. Likewise, future research could probe a greater range of variables pertaining to demographics and musical background in order to further to ascertain the influence that financial limitations have on productive listening. Greater participant numbers would further allow for the use of predictive statistics in the analysis of results and establish possible reasons for and influences on participants' attitudes.

Appendix

Appendix 1: Performer consent form

THE UNIVERSITY OF ADELAIDE

PERFORMER INFORMATION SHEET

I am currently enrolled in a Master's degree at The University of Adelaide. As part of my research focusing on tertiary music education I am asking students from The University of Adelaide and Monash University, to take part in several surveys at the Australian Flute Festival in Adelaide in October 2009. The Elder Conservatorium aims to provide a quality music education experience. It is understood that students have a range of experiences during their performance studies and that study habits are derived before and during their tertiary education. This study aims to identify these practices to inform course content and delivery. Understanding the outcomes of this study will assist us to review current music programs at the University.

While it is intended to survey students at the time of the performances, it will be judicious for me to make recordings of the case studies as a back-up in case of unexpected problems. I have discussed this research with Associate Professor Elizabeth Koch, Artistic Director of The Australian Flute Festival and identified that your participation in the Festival will meet the criteria of my project.

I am therefore writing to seek your participation in the project. Should you consent to do so, this participation would involve:

- Using your performance of the Meale Sonata at the Festival as a case study for this research, with participating students completing a brief survey on this after your performance

- Making a recording of your performance of the Meale Sonata at the Festival. This recording would be done by a technician and would not be reproduced or distributed in any way; it would be used solely for the purposes disclosed above. Any further analytical or comparative surveys would be completed during Technique and Repertoire classes at The University of Adelaide under Elizabeth Koch's supervision.

- A verbal interview regarding your opinions of commercial recordings and live performances, your approach and preparation methods for both. This interview would be recorded for the purpose of researcher reference.

Please be advised that although this study aims to identify qualities of an informed listener that will have benefit for tertiary music students, it cannot be guaranteed that your involvement will have direct personal benefits. You may at any time until the conclusion of the Australian Flute Festival withdraw your involvement from this study for any reason and without any consequence. Should you withdraw from the study you are also free to withdraw any material and documentation you have provided up to that point. All documentation and recordings obtained from you relating to this study will be accessed only by the researcher and supervisor and will be disposed of after the prescribed storage time set by the University.

Should you have any further questions that you do not wish to direct to the researcher please do not hesitate to contact my supervisor for the Master's degree, Associate Professor Kimi Coaldrake (8303 5823).Thank you for your participation.

CONTACT DETAILS

Researcher: Surekha Curkpatrick
surekha.curkpatrick@adelaide.edu.au **********

Supervisor: Associate Professor Kimi Coaldrake
kimi.coaldrake@adelaide.edu.au **********

THE UNIVERSITY OF ADELAIDE

HUMAN RESEARCH ETHICS COMMITTEE

Document for people who are participants in a research project

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.
The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:
Project title; Student's as listeners: A study at the Australian Flute Festival, 2009.
If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:
Name: Associate Professor Kimi Coaldrake
Telephone: 08 8303 5823

If you wish to discuss with an independent person matters related to

- making a complaint, or
- raising concerns on the conduct of the project, or
- the University policy on research involving human participants, or
- your rights as a participant

contact the Human Research Ethics Committee's Secretary on phone (08) 8303 6028

THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

PERFOMER CONSENT FORM

FOR PEOPLE WHO ARE PARTICIPANTS IN THE RESEARCH PROJECT

I, ……..... (*please print name)*

Consent to take part in the research project entitled: Tertiary Flute Students as Listeners: A Study at the Australian Flute Festival, 2009.

I acknowledge that I have read the attached Information Sheet.

I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

Although I understand that this research project aims to identify qualities of an informed listener that will have benefit for tertiary music students, it has also been explained that my involvement may not be of any personal benefit to me.

I have been informed that the information gained during the study may be published, and I will be identified as a participant and my interview responses may be quoted.

I understand that I am free to withdraw from the project at any time as well as any information I have provided up to that point.

I am aware that I should retain a copy of this Consent Form, when completed, and the attached Information Sheet.

(signature)……..……. *(date)*……

WITNESS

I ……..……...*(name of subject)*

the nature of the research to be carried out. In my opinion she/he understood the explanation.

Status in Project**:** ……..……

Name: .....

(signature)……..……. *(date)*……

Appendix 2: Participant consent form

THE UNIVERSITY OF ADELAIDE

SURVEY PARTICIPANT INFORMATION SHEET

I am currently enrolled in a Master's degree at The University of Adelaide. As part of my research focusing on tertiary music education I am asking students from The University of Adelaide and Monash University, to take part in several surveys prior to the Australian Flute Festival in Adelaide, October 2009. It is understood that students have a range of experiences during their performance studies and that study habits are derived before and during their tertiary education. This study aims to identify these practices to inform course content and delivery. I am wishing to survey flute students from The University of Adelaide and Monash University who will be attending the Australian Flute Festival in Adelaide in October 2009.

You are invited to take part in this study and if consent to do so will be involved in:

- Two brief surveys completed before and after the Australian Flute Festival. These will both involve assessment of recordings and live performance.
- A brief survey of two performances during the Australian Flute Festival.

This is an interesting topic that is very relevant in tertiary education and to all tertiary music students. I would greatly appreciate your participation in these surveys and assistance in achieving the best possible outcomes for this project.

Please be advised that although this study aims to identify qualities of an informed listener that will have benefits for tertiary music students, it cannot be guaranteed that your involvement will have direct personal benefits. You may at any time until the conclusion of the surveys withdraw your involvement from this study for any reason and without any consequence. Should you withdraw from the study you are also free to withdraw any material and documentation you have provided up to that point.

This study is completely confidential and while information gained during the study may be published, you will not be identified and my personal results will not be divulged. Your confidentiality and anonymity as a participant will be maintained at all times during and after the study. All documentation obtained from you relating to this study will be secured and can only be accessed by the researcher and supervisor. Should you have any further questions that you do not wish to direct to the researcher please do not hesitate to contact my supervisor for the Master’s degree, Associate Professor Kimi Coaldrake at any time.

CONTACT DETAILS

Researcher: Surekha Curkpatrick

surekha.curkpatrick@adelaide.edu.au **********

Supervisor: Associate Professor Kimi Coaldrake

kimi.coaldrake@adelaide.edu.au **********

THE UNIVERSITY OF ADELAIDE

HUMAN RESEARCH ETHICS COMMITTEE

Document for people who are participants in a research project

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project title; Student's as listeners: A study at the Australian Flute Festival, 2009.

If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

Name: Associate Professor Kimi Coaldrake
Telephone: 08 8303 5823

If you wish to discuss with an independent person matters related to

- making a complaint, or
- raising concerns on the conduct of the project, or
- the University policy on research involving human participants, or
- your rights as a participant

contact the Human Research Ethics Committee's Secretary on phone (08) 8303 6028

THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

PARTICIPANT CONSENT FORM

FOR PEOPLE WHO ARE PARTICIPANTS IN THE RESEARCH PROJECT

Consent to take part in the research project entitled: Tertiary flute students as listeners: A study at the Australian Flute Festival, 2009.

I acknowledge that I have read the attached Information Sheet.

I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

Although I understand that this research project aims to identify qualities of an informed listener that will have benefit for tertiary music students, it has also been explained that my involvement may not be of any personal benefit to me.

I have been given the opportunity to have a member of my family or a friend present while the project was explained to me.

I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.

I understand that I am free to withdraw from the project at any time as well as any information I have provided up to that point.

I am aware that I should retain a copy of this Consent Form, when completed, and the attached Information Sheet.

(signature)…….....……...… *(date)*……

WITNESS

I have described to …….....…….*(name of subject)*

the nature of the research to be carried out. In my opinion she/he understood the explanation.

Status in Project**:** …….....…….

Name: .....,.....

(signature)…….....…… *(date)*……

Appendix 3: Complete Survey 1

SECTION 1

General Participant Information (Demographics for statistical purposes only)

Full Name _____

Student number _____

Student email address_____

18-21 21-23 23-25 25-30 30-40 41-50 51-65 Over 65

Age (please circle)

University_____

Degree title _____

Majors_____

Minors _____

Please circle

Undergraduate Postgraduate Recent graduate

Full-time Part-time

Current year level _____

OR

Year degree was completed _____

SECTION 2

1. What Secondary school did you attend? Was it a specialist music school?

_____

2. a) Estimate how long you have listened to flute recordings in the last week? (please circle)

   30 mins 30-1 1-2 2-3 3-4 >4 hours

   b) Is this amount typical? If not why and how many do you normally listen to? (please circle)

   30 mins 30-1 1-2 2-3 3-4 >4 hours

3. What listening technology do you own? (please circle all that apply)

   CD Player Portable CD Player iPod/MP3 Player

   Computer Other_____

4. Which have you used on a regular basis in the last month to listen to music (please circle all that apply)

   CD Player Portable CD Player iPod/MP3 Player

   Computer YouTube Other_____

5. a) What kind of flute recordings do you listen to? (please circle all that apply)

   Solo Flute Flute and Piano Chamber

   Orchestral Other_____

b) Preferred recording labels if any? (please circle all that apply)

EMI	Naxos	Decca	Naive
Tall Poppies	None	Other_____	

6. On average how much would you spend on recordings a month? (iTunes, CD's etc.)

_____

7. What are the reasons you do or don't listen to music (CD's, Tracks, MP3 downloads)?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

a) I like to listen to pre-recorded music CDs, Tracks or MP3s because I learn ideas about interpretation of the work and to learn repertoire.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

b) I listen to pre-recorded music CDs, Tracks or MP3s to broaden my general musical knowledge.

c) I listen to pre-recorded music CDs, Tracks or MP3s for personal enjoyment.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

d) I listen to pre-recorded music CDs, Tracks or MP3s to learn the standards of performance from professional musicians.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

e) My personal enjoyment is influenced by the relevance to my study.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

f) My personal enjoyment is influenced by the technical quality of the recording.

g) Other reasons

_____

8. a) Estimate how many live performances you have attended in the last two weeks? What kind of performances were they? (Orchestral, University lunch hour, ASO etc.)

1	2-3	4-5	6-7	8-9	>10

Kind:_____

b) If this amount is not typical, why and how many and what kind do you normally attend?

1	2-3	4-5	6-7	8-9	>10

Kind:_____

9. What are the main reasons you attend concerts?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

a) I attend concerts to broaden my general musical knowledge.

b) I attend concerts to learn about the stagecraft of performance.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

c) I attend concerts for personal enjoyment.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

d) My personal enjoyment is influenced by the relevance to my study.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

e) I attend concerts to learn about standards of performance of professional musicians.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

f) I attend concerts only because of University requirements.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Other reasons _____

10. What are the main reasons you wouldn't attend a concert?

a) Financial reasons

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

b) Other commitments

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

c) Dislike the performer/group that is performing

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

d) Wasn't interested in the repertoire being played

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

e) I've heard it played in performance before

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

f) I own a recording of it that I don't like

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

g) I don't need to because I own a recording

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

h) I don't have the time

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Other reasons _____

SECTION 3

Listening 1

Listen to the first recording and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional)

_____

Staccato	1	2	3	4	5	N/A

Comment (optional)

_____

Other articulation 1 2 3 4 5 N/A

Comment (optional)

Dynamics 1 2 3 4 5 N/A

Comment (optional)

Tone Quality 1 2 3 4 5 N/A

Comment (optional)

Tuning 1 2 3 4 5 N/A

Comment (optional)

Rhythm 1 2 3 4 5 N/A

Comment (optional)

Musicality 1 2 3 4 5 N/A

Comment (optional)

Style 1 2 3 4 5 N/A

Comment (optional)

Expression 1 2 3 4 5 N/A

Comment (optional)

Vibrato 1 2 3 4 5 N/A

Comment (optional)

Breathing 1 2 3 4 5 N/A

Comment (optional)

Phrasing 1 2 3 4 5 N/A

Comment (optional)

Ensemble 1 2 3 4 5 N/A

Comment (optional)

Overall standard 1 2 3 4 5 N/A

Give your reasons

---

11. What did you think was the best aspect about the playing? Why?

_____

_____

12. What did you like least about the playing? Why?

_____

_____

13. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

_____

14. Can you hear an individual character and is this an important part of the playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain._____

15. What are you looking forward to about hearing the flautist perform this work live?

_____

16. Which aspects of this player/performance would you like to emulate in your own playing?

_____

_____

Listening 2

Listen to the second recording and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional)

Staccato	1	2	3	4	5	N/A

Comment (optional)

Other articulation	1	2	3	4	5	N/A

Comment (optional)

Dynamics	1	2	3	4	5	N/A

Comment (optional)

Tone Quality	1	2	3	4	5	N/A

Comment (optional)

Tuning 1 2 3 4 5 N/A

Comment (optional)

Rhythm 1 2 3 4 5 N/A

Comment (optional)

Musicality 1 2 3 4 5 N/A

Comment (optional)

Style 1 2 3 4 5 N/A

Comment (optional)

Expression 1 2 3 4 5 N/A

Comment (optional)

Vibrato 1 2 3 4 5 N/A

Comment (optional)

Breathing 1 2 3 4 5 N/A

Comment (optional)

Phrasing 1 2 3 4 5 N/A

Comment (optional)

_____

Ensemble 1 2 3 4 5 N/A

Comment (optional)

_____

Overall standard 1 2 3 4 5 N/A

Give your reasons

_____

_____

17. What did you think was the best aspect about the playing? Why?

_____

_____

18. What did you like least about the playing? Why?

_____

_____

19. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

_____

20. Can you hear an individual character and is this an important part of the playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain._____

21. What are you looking forward to about hearing the flautist perform a work by the same composer live?

_____

22. Which aspects of this player/performance would you like to emulate in your own playing?

_____

_____

SECTION 3

23. When performing yourself would your preferred audience to be made up of;

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Flautists	1	2	3	4	5
Other musicians	1	2	3	4	5
Non musicians	1	2	3	4	5

Explain_____

24. Do you feel that you could achieve the standard of playing you hear on the recordings or any aspects of them?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain.

_____

_____

25. Who are your favourite flautists to listen to?

_____

26. Do you find listening to recordings helpful when you are learning pieces?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Why or Why not?

_____

_____

27. Does listening to recordings impact upon your feelings towards your own playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?

_____

_____

28. Do you feel comfortable performing for others of a higher standard/year level than yourself?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Why/Why not?

_____

_____

29. Are you satisfied with the performance opportunities available at University? Explain.*

_____

30. a) On a scale of 1 to 5 do you feel more motivated to practice after listening to recordings?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

b) Why or why not?

_____

_____

31. How do you feel towards your own playing when a performer makes a musical error?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain.

_____

_____

32. How do you feel towards a performer when they make a musical error?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain.

_____

_____

33. Does the venue of the concert affect your enjoyment of the performance? *

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain.

_____

34. Are the concerts programmed by the University helpful to your learning? Why/why not?*

_____

35. Do you think the University provides sufficient number of practice rooms for students?*

_____

36. Which University ensembles are you involved in? (please circle all that apply)

ECSO ECWO Chamber (please specify) Other_____

37. How many live concerts have you performed in the last month and what kind were they?

_____

38. What repertoire do you enjoy playing?*

_____

39. Are you involved in other musical activities outside of the University?

_____

40. After you graduate would you like to study overseas? If so, where and with whom?*

_____

41. Have you studied a degree other than music at University? If so, what?*

_____

42. Do you identify yourself as belonging to Gen X, Gen Y, Baby Boomer, Other please specify.*

_____

43. What is your Hometown? (Country/Interstate/Adelaide)

_____

Consider the following scenario

You are required to perform a new work not previously known to you at Forum in three months. Fortunately two options are available to you:

Option One: There is a free concert at Robert Blackwood Hall which the work is programmed.

Option Two: The Monash Music Library is opened late for you to listen to a CD of this work performed by the same flautist.

Please answer:

I would prefer to listen to the concert in Robert Blackwood Hall.

Strongly Disagree Disagree Neutral Agree Strongly Agree

I would prefer to listen to the CD.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Explain.

_____

Consider the following scenario: Your favorite flute composition is to be performed in Robert Blackwood Hall at a free concert tomorrow while the Monash Music Library has just sent an email to say that the Library has a CD of this work performed by the same flautist available for CD loan for 24 hours.

Please answer:

I would prefer to listen to the concert in Elder Hall.

Strongly Disagree Disagree Neutral Agree Strongly Agree

I would prefer to listen to the CD.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Explain.

_____

Appendix 4: Complete Survey 2

Listening Assessment

MEALE – GEOFFREY COLLINS

Listen to the performance and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style. This can be completed while listening and the extended answers can be completed after the performance.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional) _____

Staccato	1	2	3	4	5	N/A

Comment (optional) _____

Other articulation	1	2	3	4	5	N/A

Comment (optional) _____

Dynamics 1 2 3 4 5 N/A

Comment (optional) _____

Tone Quality 1 2 3 4 5 N/A

Comment (optional) _____

Tuning 1 2 3 4 5 N/A

Comment (optional) _____

Rhythm 1 2 3 4 5 N/A

Comment (optional) _____

Musicality 1 2 3 4 5 N/A

Comment (optional) _____

Style 1 2 3 4 5 N/A

Comment (optional) _____

Expression 1 2 3 4 5 N/A

Comment (optional) _____

Vibrato 1 2 3 4 5 N/A

Comment (optional)_____

Breathing 1 2 3 4 5 N/A

Comment (optional) _____

Phrasing 1 2 3 4 5 N/A

Comment (optional) _____

Ensemble 1 2 3 4 5 N/A

Comment (optional) _____

Overall standard 1 2 3 4 5 N/A

Give your reasons

_____

1. What did you think was the best aspect about the playing? Why?

_____

2. What did you like least about the playing? Why?

_____

3. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

4. Can you hear the flautists individual character and is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

5. Which aspects of this player/performance would you like to emulate in your own playing?

_____
_____

6. Did the performer play like you expected?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

7. Did you prefer this live performing to the recording listened to in survey one?

Strongly Disagree	Disagree	Neutral	Agree	Strongly

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

8. Did the non audio aspects of the live performance change your enjoyment of the concert?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

9. Did the performer's attitude and personality heighten your enjoyment of the performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

10. Did being aware of the performer's attitude and personality change your overall opinion of the performer and enjoyment of the listening experience? (enhance their performance)

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

11. Do you feel that you could achieve the standard of playing or any aspects of them after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

12. Does listening to live performances impact upon your feelings towards your own playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?_____

13. On a scale of 1 to 5 do you feel more motivated to practice after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

SCHWANTNER – ALEXA STILL

Listen to the performance and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style. This can be completed while listening and the extended answers can be completed after the performance.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional) _____

Staccato	1	2	3	4	5	N/A

Comment (optional) _____

Other articulation	1	2	3	4	5	N/A

Comment (optional) _____

Dynamics	1	2	3	4	5	N/A

Comment (optional) _____

Tone Quality 1 2 3 4 5 N/A

Comment (optional) _____

Tuning 1 2 3 4 5 N/A

Comment (optional) _____

Rhythm 1 2 3 4 5 N/A

Comment (optional) _____

Musicality 1 2 3 4 5 N/A

Comment (optional) _____

Style 1 2 3 4 5 N/A

Comment (optional) _____

Expression 1 2 3 4 5 N/A

Comment (optional) _____

Vibrato 1 2 3 4 5 N/A

Comment (optional) _____

Breathing 1 2 3 4 5 N/A

Comment (optional) _____

Phrasing 1 2 3 4 5 N/A

Comment (optional) _____

Ensemble 1 2 3 4 5 N/A

Comment (optional) _____

Overall standard 1 2 3 4 5 N/A

Give your reasons

_____

1. What did you think was the best aspect about the playing? Why?

_____

2. What did you like least about the playing? Why?

_____

3. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

4. Can you hear the flautists individual character and is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

5. Which aspects of this player/performance would you like to emulate in your own playing?

_____

_____

6. Did the performer play like you expected?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

7. Did you prefer this live performing to the recording listened to in survey one?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	

8. Did the non-audio aspects of the live performance the change your enjoyment of the concert?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

9. Did the performer's attitude and personality heighten your enjoyment of the performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

10. Did being aware of the performer's attitude and personality change your overall opinion of the performer and enjoyment of the listening experience? (enhance their performance)

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

11. Do you feel that you could achieve the standard of playing or any aspects of them after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

12. Does listening to live performances impact upon your feelings towards your own playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?_____

13. On a scale of 1 to 5 do you feel more motivated to practice after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Appendix 5: Complete Survey 3

Survey Three – After the Festival

This Survey is similar to the listening exercises you have previously completed in Survey One and Survey Two. Again there are two sections to this;

Section One: Meale *Sonata*

Section Two: Schwantner *Looking Back*

As in the previous Surveys the 1-5 answers should be completed first while listening to the piece. Please do not start the extended answer questions until advised to do so.

Please note: Your answers are completely confidential and will never be linked to your name. Brutally honest answers are much appreciated**.**

Thank you again for your participation and enthusiasm, I really do appreciate it!

MEALE

Listen to the performance and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style. This can be completed while listening and the extended answers can be completed after the performance.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional) _____

Staccato	1	2	3	4	5	N/A

Comment (optional) _____

Other articulation	1	2	3	4	5	N/A

Comment (optional) _____

Dynamics	1	2	3	4	5	N/A

Comment (optional) _____

Tone Quality 1 2 3 4 5 N/A

Comment (optional) _____

Tuning 1 2 3 4 5 N/A

Comment (optional) _____

Rhythm 1 2 3 4 5 N/A

Comment (optional) _____

Musicality 1 2 3 4 5 N/A

Comment (optional) _____

Style 1 2 3 4 5 N/A

Comment (optional) _____

Expression 1 2 3 4 5 N/A

Comment (optional) _____

Vibrato 1 2 3 4 5 N/A

Comment (optional) _____

Breathing 1 2 3 4 5 N/A

Comment (optional) _____

Phrasing 1 2 3 4 5 N/A

Comment (optional) _____

Ensemble 1 2 3 4 5 N/A

Comment (optional) _____

Overall standard 1 2 3 4 5 N/A

Give your reasons

_____

1. What did you think was the best aspect about the playing? Why?

_____

2. What did you like least about the playing? Why?

_____

3. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

4. Can you hear the flautists individual character

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

b) Is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

5. Does the performer's individual character alter your enjoyment of the performance?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain_____

6. Which aspects of this player/performance would you like to emulate in your own playing?

_____

_____

7. Did you prefer this recording compared to the live performance of this work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

8. Did you prefer this recording compared to the previous recording of this work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

9. Do you feel that you could achieve the standard of playing or any aspects of them after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

SCHWANTNER

Listen to the performance and in the boxes below indicate how you would rate the performer's playing standard for each of the following aspects, with one being the lowest and five the highest. This assessment should be based on what you think of the performer's technical facility on the flute rather than about personal preference regarding repertoire or playing style. This can be completed while listening and the extended answers can be completed after the performance.

	Low				High	
Legato	1	2	3	4	5	N/A

Comment (optional) _____

Staccato	1	2	3	4	5	N/A

Comment (optional) _____

Other articulation	1	2	3	4	5	N/A

Comment (optional) _____

Dynamics	1	2	3	4	5	N/A

Comment (optional) _____

Tone Quality 1 2 3 4 5 N/A

Comment (optional) _____

Tuning 1 2 3 4 5 N/A

Comment (optional) _____

Rhythm 1 2 3 4 5 N/A

Comment (optional) _____

Musicality 1 2 3 4 5 N/A

Comment (optional) _____

Style 1 2 3 4 5 N/A

Comment (optional) _____

Expression 1 2 3 4 5 N/A

Comment (optional) _____

Vibrato 1 2 3 4 5 N/A

Comment (optional) _____

Breathing 1 2 3 4 5 N/A

Comment (optional) _____

Phrasing 1 2 3 4 5 N/A

Comment (optional) _____

Ensemble 1 2 3 4 5 N/A

Comment (optional) _____

Overall standard 1 2 3 4 5 N/A

Give your reasons

_____

10. What did you think was the best aspect about the playing? Why?

_____

11. What did you like least about the playing? Why?

_____

12. Were there any aspects of the playing which you thought could have been different? If so, please describe.

_____

13. Can you hear the flautists individual character

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

b) Is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

_____

14. Does a performer's individual character alter your enjoyment of their performance?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain_____

15. Which aspects of this player/performance would you like to emulate in your own playing?

_____

_____

16. Did you prefer this recording compared to the live performance of this work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

17. Did you prefer this recording compared to the previous recording of this composers work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

18. Do you feel that you could achieve the standard of playing or any aspects of them after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

_____

19. Do you find recordings helpful when you are learning pieces?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

20. Do you find performances helpful when you are learning pieces?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

21. Does listening to recordings impact upon your feelings towards your own playing?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

How?_____

22. Does listening to performances impact upon your feelings towards your own playing?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain_____

23. On a scale of 1 to 5 do you feel more motivated to practice after listening to this performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

24. Do you find recordings helpful when you are learning pieces?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

25. Do you find live performances helpful when you are learning pieces?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

26. When you are listening to learn do you prefer to listen to recordings?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

_____

27. When you are listening to learn do you prefer to listen to performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

_____

28. For each of the following please indicate to what extent you use CD Recordings and Live Performance :

Learning repertoire:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CD Recordings	1	2	3	4	5
Live Performance	1	2	3	4	5

Comment_____

Finding new repertoire:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CD Recordings	1	2	3	4	5
Live Performance	1	2	3	4	5

Comment

_____

Enjoyment:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CD Recordings	1	2	3	4	5
Live Performance	1	2	3	4	5

Comment

_____

University Requirement:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CD Recordings	1	2	3	4	5
Live Performance	1	2	3	4	5

Comment

_____

29. Do you think listening to recordings changes your approach to learning the flute?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

30. Do you think listening to live performances changes your approach to learning the flute?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

31. Do you think listening to recordings affects the way you approach performance/performing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

How?Explain_____

_____

32. Do you try to emulate what you hear on recordings? (This doesn't mean do you imitate an entire interpretation of a piece by one artist, it but refers to any imitation or culmination of various aspects from different recordings).

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

_____

33. What are the characteristics you listen to most closely on recordings?

_____

_____

34. What are the characteristics do you listen to most closely at live performances?

_____

_____

35. Do you think that listening to recordings which have had mistakes edited out, changes the way you listen to live performance?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Please explain in as much detail as possible.

_____

_____

_____

_____

_____

_____

_____

Appendix 6: Examples of different types of survey questions

Demographic Questions: Survey 1.Demographics

University_____

Degree title _____

Majors_____

Minors _____

Please circle

Undergraduate Postgraduate Recent graduate

Full-time Part-time

Focus Questions

Example 1: Survey 1. Question 24.

Do you feel that you could achieve the standard of playing you hear on the recordings or any aspects of them?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Example 2: Survey 1. Question 32.

How do you feel towards a performer when they make a musical error?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positive	1	2	3	4	5
Negative	1	2	3	4	5

Explain_____

Placebo Questions

(These are marked in Appendix 3: Survey 1 with a *)

Example 1: Survey 1. Question 35.

Do you think the University provides sufficient number of practice rooms for students?

_____

Example 2: Survey 1, Question 34

Are the concerts programmed by the University helpful to your learning? Why/why not?

_____

Quantitative Questions

Example 1.: Listening assessments

Indicate what you think about the performer's standard for each element with one being the lowest and five the highest

Low				High
1	2	3	4	5

Example 2: Survey 1, Question 31

How do you feel towards your own playing when a performer makes a musical error?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Example 3: Survey 1, Question2. a)

Estimate how long you have listened to flute recordings in the last week? (please circle)

<30 30-1 2-3 4-5 6-7 8-9 10>

Qualitative Questions

Survey 3. Question 2 and 15.

What did you like least about the playing? Why?

_____

_____

Combination Quantitative and Qualitative Questions

Survey 3. Questions 10 & 23. Listening Examples 1 &2.

Does listening to recordings impact upon your feelings towards your own playing?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

How_____

Paired Questions

Survey 1. Questions 15 & 21 Listening. What are you looking forward to about hearing the flautist perform this work live?

Survey 2: Question 6&7. Did the performer play like you expected?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Appendix 7: Examples of ineffective survey questions

Example 1.

In the following questions it was not clear to participants what the flautists individual character referred to. While it referred to the presence of character or 'liveness' in the music a number of participants said they could not answer this question as they did not know the performer and therefore did not know their character. Further the qualitative responses of those who did answer indicated that some participant's based their response on the personal character of the player as a person and others based it on the personal character of the player as a flautist.

Survey 2, Question 4.

Can you hear the flautists individual character and is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Survey 3 Question 3 a) and b) and Question 4

Can you hear the flautists individual character?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Is this an important part of their playing?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Does the performer's individual character alter your enjoyment of the performance?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Positively	1	2	3	4	5
Negatively	1	2	3	4	5

Explain_____

Example 2.

The following questions were ineffective as many participants responded that they could not adequately recall the listening examples in the previous survey.

Survey 2, Question 6.

Did you prefer this recording compared to the live performance of this work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Survey 3, Question 6 and 7

Did you prefer this recording compared to the previous recording of this work that you heard?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Explain_____

Appendix 8: Survey 3 listening assessment

	Live Recording Geoffrey Collins		Live Recording Alexa Still	
	Min-Max	**Mean**	**Min-Max**	**Mean**
Overall	3-5	4.29	3-5	3.86
Legato	3-5	4.29	3-5	3.91
Staccato	3-5	3.92	3-5	4.14
Other Articulation	3-5	4.21	3-5	4.07
Dynamics	3-5	4.07	2-5	3.71
Tone	3-5	4.00	2-5	3.50
Tuning	3-5	4.54	2-5	3.64
Rhythm	3-5	4.57	3-5	4.36
Musicality	2-5	4.00	3-5	3.93
Style	3-5	4.29	3-5	4.21
Expression	3-5	4.21	3-5	4.14
Vibrato	3-5	3.79	2-5	3.93
Breathing	4-5	4.71	3-5	4.29
Phrasing	3-5	4.50	2-5	4.07
Ensemble	3-5	4.71	2-5	4.21

N=14

Appendix 9: Survey 3 listening assessment highest ranked elements

Live Recording	**Commercial Recording**
Geoffrey Collins	**Alexa Still**
Highest ranked elements	**Highest ranked elements**
Mean	**Mean**
4.71 Breathing/Ensemble	4.36 Rhythm
4.57 Rhythm	4.29 Breathing
4.54 Tuning	4.21 Style/Ensemble
4.50 Phrasing	4.14 Expression/Staccato
4.29 Legato/Style/	4.07 Phrasing

N=14

Appendix 10: Survey 3 listening assessment lowest ranked elements

Live Recordings	**Live Recording**
Geoffrey Collins	**Alexa Still**
Lowest ranked elements	**Lowest ranked elements**
Mean	**Mean**
4.21 Expression/Other Articulation	3.93 Vibrato
4.07 Dynamics	3.91 Legato
4.00 Musicality/Tone	3.71 Dynamics
3.92 Staccato	3.64 Tuning
3.79 Vibrato	3.50 Tone

N=14

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