Constrained Creativity:

Composing Curriculum-based Songs for Learning

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**ABSTRACT**
For more than twenty-five years I have been writing curriculum-based songs as a way of helping my teacher friends and colleagues deliver complex and sometimes dense content to their students. My desire to improve my skills and understanding of the process led me to investigate the process of writing educational songs. Describing it must, of necessity, relate a personal journey. In order to describe this journey this thesis has adopted the qualitative research methodology of autoethnography. This narrative approach combines biography, ethnography, and self-analysis, and presents contextualized information about a subject, linking personal experiences with theory. The goal is to connect with the reader through evocative and accessible storytelling, and to extend understanding of a culture or process.

This methodology places me as the principal subject of the research. It not only describes the evolution of my research and composition processes but also expresses my emotional and professional journey. The multilayered account embeds three vignettes under the title of Three Cups of Tea that portray pivotal moments within my inner journey, and explores the effect of research, reflection, reflexivity, and critical evaluation on my work and pedagogy.

Curriculum-based song is a pedagogical device used to help students learn and remember. The songs need to be well researched, written for the needs and capabilities of targeted age groups, and must engage the students. The melody must be catchy and memorable, as this acts as a trigger to memory. Lyrics of curriculum songs result from
deep research into prescribed topics, and are set to rhythms and music that are appealing to the target audience, in this case middle school students.

Using examples from my own compositions as a case study, I analyse my process of creating original curriculum-based songs, and how my writing and composition techniques evolved over two years of research. I document the creation of sixteen songs about the ancient civilisations of Egypt, Greece, Rome and China. Research data consists of multiple sources of information, including personal journals, work notes, poems, reflective analysis, and conversations with other educators. The purpose of sharing my work and experiences through autoethnography is to expand understanding of the process of curriculum-based song composition, and to connect with other educators who may find this information useful in their own teaching.
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I am eternally grateful to my husband Conrad Adelman for his endless patience and support, and for always doing the dishes.
DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other 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.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying online via the University’s Open Access repository eSpace.

Aniko Debreceny
CHAPTER I

INTRODUCTION

1.1 Problem Statement

Education in the twenty-first century is evolving to meet the needs of a rapidly changing society. Increased access to digital information and communication through technology is changing instruction (O'Hara, 2009). However, poor test results and students’ lack of engagement in school show there is room for improvement in pedagogical approaches (Bridgeland, 2006). Multiple studies have shown that arts-based education can enhance learning outcomes (Jones-Lewis, 2015). I propose that song, having been used through history as a tool for communication, learning and memorisation, should be considered as a beneficial pedagogical approach.

This issue is worth examining for the reason that educational assessments and testing show mediocre student test results and lack of improvement over time, even in developed countries where education is well funded (DeSilva, 2017). Many school systems use standardised testing to assess comprehension and knowledge, identify learning disabilities, and evaluate the effectiveness of teachers and institutions (Özturgut, 2011, p. 1) in order to provide a “fair and objective measure of student achievement, [and] ensure teachers and schools are accountable to taxpayers” (ProCon, 2016). While mandated assessments fulfill these roles, they are also often criticized for a variety of reasons. These include the necessity for teaching to the test, using a narrow curriculum, discouraging innovative teaching, encouraging cheating, increased student anxiety (Kelleghan, 2012; Polesel, 2012; Thompson, 2012), neglect of the poorest-achieving
students (Klenowski, 2012), and learning test-taking strategies rather than the subject itself (Ravitch, 2016). Test scores are linked to funding and resources for schools and educational institutions (Spann, 2015), as well as teacher evaluations and salaries (Schochet, 2010).

One element of testing is the ability to recall facts and information for retrieval. While this may not be ideal educationally, it satisfies institutional requirements for evaluation and accountability. With standardized testing requiring increased test preparation time in the classroom, it would seem a valuable endeavour to investigate any pedagogy that may improve students’ learning, retention, and recall.

Song can be effective in learning for a variety of reasons. A popular belief is that song accommodates students’ different learning styles, such as Gardner’s multiple intelligences (1983; 2006) and the VARK (Visual, Aural, Read/Write, and Kinesthetic) sensory model (Fleming, 2001). Teaching essential curricular materials in a variety of ways activates a range of intelligences, thereby improving overall learning.

Another positive effect of using song in the classroom is that it offers a change from routine activity, and can lower students’ affective filter (Krashen, 1982), thereby improving engagement and motivation. Singing also enhances retention (Pindale, 2013), student attitudes, and socialization (Welch, 2014).

There are relatively few studies into the use of curriculum-based songs, and very few explore the process of creating such materials (McFadden, 2013). This lack indicates a need for further studies such as this project to investigate the process of writing songs for learning.
1.2 Research Question

As a composer and educator, I am uniquely qualified to examine the process of creating educational songs for young students, utilising over twenty-five years of personal experience. The goal of this thesis is to examine the research question: How has my process of researching, writing, and scoring curriculum-based songs changed as I engaged with the literature in the process of writing a thesis?

1.3 Methodology

This investigation utilises qualitative research methodology, which offers creative and flexible approaches to produce new knowledge and understandings. Qualitative research is naturalistic, as it is collected in natural settings (Lichtman, 2012), and interpretive, where the researcher’s experience shapes the collection and analysis of the data (Creswell, 2013a). Kemmis and Wilkinson (2002) describe it as participatory action research, which investigates reality in order to transform it. Qualitative research is “broad and open-ended” (Choy, 2014, p. 102), interdisciplinary, and trans-disciplinary (Denzin, 2011). Qualitative researchers analyse and interpret data by “deconstructing, generalising, inferring, and (re)assembling in order to critique, describe and explain” the information (Franklin, 2013, p. 25).

Autoethnography is a qualitative research methodology ideally suited to describe a personal journey of change over time in narrative form. Autoethnographies often focus on several vignettes describing pivotal moments or epiphanies in the researcher’s progress through the process of investigation, and how these experiences have influenced their work. I have written about three such events as structural elements of my creative journey. These are supported by passages incorporating reflection, which is looking back
and analysing a past experience in order to improve professional practice (Fook, 2007; Maclean, 2010; Nagata, 2004) and reflexivity, which is ongoing self-analysis and self-critique (Denzin, 2016). I also include feedback from previous experiences. Original haiku poems express my emotional responses throughout the process.

I chose to describe the experiences through the act of sharing tea. This traditional Japanese ritual allows the participants to retreat from the outside world into a meditative space that fosters an introspective state of mind (Penrod, 2011) as well as an opportunity to “forge and reinforce social ties” (Willmann, 2011). These three “cups of tea” vignettes are embedded in the thesis, and describe my progress in a condensed narrative, so that many conversations and cups of tea are combined into a single vignette.

Chapter 2 presents a literature review that first examines the historical use of song in education, followed by an overview of studies of why and how singing enhances learning. The successful use of curriculum-based songs is documented. I discuss the elements of creativity and document composition methods of other composers.

Chapter 3 presents the characteristics of educational songs for children, as well as other song genres: art song, folk song, popular song, and therapeutic song. It describes the musical and literary elements of rhyme, melody, form, tonality, range, metre and harmony, and how they are used specifically in children’s songs.

Chapter 4 discusses the methodology used in the thesis. Qualitative research utilises a naturalistic, interpretive, and reflective approach. I have selected the evocative autoethnography approach, which analyses the researcher’s personal experience through introspection and narrative in order to understand a process or practice.
Chapter 5 presents a general outline of my writing and composition methods for writing children’s curriculum-based songs. This process is presented within the framework of the common model of creativity of preparation, incubation, illumination, and verification (Sadowski, 1999).

Chapter 6 analyses data that documents my creative process, using songs written for this project as exemplars. I discuss the evolution of my creative process and skills from previous similar curriculum-based composition, by contrasting these songs with songs written earlier in my composition career, and sharing examples of music and lyrics from my journals and workbooks.

Chapter 7 discusses the research and results, summarizing the influences on my composition and their contribution to my development as a composer. It suggests areas for further study. Two appendices present the lyrics and music of the songs generated by this research.

1.4 Educational Significance

This thesis is unusual in that it presents an overview of current literature about song in learning and history, and invites the reader to accompany me on my creative journey. This is achieved by utilising unique primary documents such as my personal and work journals, and introspective haiku poems written throughout my research. These illustrate the evolution in my researching, writing and composition skills, and describe the incorporation of ethnomusicology into the songs through the use of appropriate music scales and ethnic “trademark” motifs.

This thesis presents a narrative of the researcher’s journey and evolution as a composer of curriculum-based songs. It describes how the research into children’s and
educational songs, creativity, and song composition transformed my writing techniques and perspective. By presenting an overview of children’s songs and their composition style, then describing my personal process to compose songs for learning, I have provided a template for other teachers to follow if they wish to create musical materials for their classrooms.
Many years ago I was the music teacher for the elementary and middle school grades at a Steiner/Waldorf school in the United States. Carpooling home from school with the seventh and eighth grade teacher, we discussed the difficulties her students faced in the classroom, as some of them were poor readers, dyslexic, or had learning difficulties. As their chorus teacher, I had experienced their enjoyment and engagement in singing, and so suggested that song may be a useful teaching tool.

“Maybe I could write a song to help them remember the lesson materials,” I suggested, and asked what subject she would be teaching next in the curriculum.

“Astronomy,” she replied. “We will be studying Greek mythology about the constellations. How about a song about Cassiopeia?”

As we drove she outlined the tale, which I wrote down on the back of an old envelope. Over the next few days I researched the story and created the song, titled “A Night with the Stars”. It is in three parts in a doo-wop style, to be appealing and fun, and can be sung either accompanied or *a capella*. 
We performed the song at the school’s winter concert. After the show, my friend and I sat drinking tea and talking about how much the students had enjoyed using song as a learning tool.

“What will they be learning about in their next main lesson block?” I enquired.


Flushed with enthusiasm after the successful performance, I foolishly said, “Why don’t I write an ‘opera’ set in the de Medici palace in Florence, where everybody who is anybody in the Renaissance sings about why they are important?” If I had only known what I was getting myself into! This was the beginning of a whole new chapter in my teaching career.

kids high on success,
applause. “More, please,” they ask, so

an opera’s born.

And thus “Renaissance!” was created, a series of eleven songs about major figures in the European Renaissance. This was presented several times in full costume, with props and banners.

Reflection

Later I would be told two anecdotes that illustrate the efficacy of learning through songs for retention of curricular materials. The first of these dates from the next year when the class visited a local Benedictine monastery, where the Abbot himself conducted a tour of the chapel. He was astounded that when they walked into the choir loft the students spontaneously started singing a Gregorian chant in Latin, which had been part of the Renaissance “opera”.

Reflection
The second reminiscence occurred two years later when several of the students in that class elected to attend a different high school. After being tested on the Renaissance period, their new history teacher pulled them all aside and asked, “I can’t work out how you all have the same answers to the questions. You are sitting on different sides of the classroom, at the front and the back, but your responses are identical. How are you cheating?”

The students laughed, and explained that when they read the question, they would sing the appropriate song in their heads and write down the lyrics as the answers. They then sang the songs for her, and gained full credit.

Background to the study

I first wrote children’s songs when teaching in a string and musicianship programme at the West Australian Conservatorium of Music. We found that singing a melodic pattern or sequence for two weeks enabled the students to then be able to play them in tune and rhythmically correctly on their instruments. These “violin songs” were very basic to start with, as was appropriate for beginner players, and the lyrics were mostly letter names of the notes to help the students remember them. I soon included more interesting rhythms and melodic motives, and we ended up with a repertoire of skill-based melodies with fun, child-friendly lyrics, mostly about animals.

These first curriculum-based songs used a very different creative process to the way I compose today. Indeed, this graduate research project was triggered by my desire to understand the process, as well as my interest in how and why song works in the classroom to facilitate learning.
When I began composing songs for Waldorf-based schools, there was considerable flexibility in the content. Rather than having to adhere to strict federally mandated curriculum guidelines, concepts and vocabulary as I would have in the public school system, I was given virtually free rein to write songs that included the facts or information that I felt were essential. The teachers I wrote for were catalysts rather than collaborators, suggesting topics such as Homer’s *Odyssey* and African-American history. They did not become involved in fine-tuning lyrics or requesting changes to melodies or harmony. They exhibited an extraordinary level of trust in my abilities to write songs that would appeal to the students and be within their performance capabilities, yet incorporate the relevant knowledge at an age-appropriate level. I was very fortunate to have my friend, who was a highly regarded teacher, as an advocate for my work.

I recently was contacted by one of the students from that period who is now teaching at the school. They are still using my songs to teach, over two decades later.

As this was the early days of the Internet, my data collection was almost completely via books, thus limiting the amount of information readily available to me. The first series of songs about the Renaissance and the history of invention were based largely on the books I could find at the school and local libraries, and include far fewer facts and details than the songs I would write later. For Homer’s *Odyssey*, I used the same children’s text that the students would read in their classroom for continuity, and the appropriate language and vocabulary level.

Over time I wrote more “teaching song operas”, based on the history of invention (Eureka!), African-American history (Dreams and Heroes), Homer’s *Odyssey*, and a commissioned work for the Maryland School for the Blind (Out of Darkness). I also
composed songs about geography, physics, science, Quaker values, Dr. Seuss, the environment, astronomy, Greek myths and Aesop fables.

I was now working with home school choruses, where again there were few curriculum guidelines. In the United States there are a multitude of home schooling online accredited programmes available (AOA, 2016; K12, 2016; time4learning, 2016), some with songs included (abeka, 2016; CC, 2016), as well as a wide variety of teaching songs on the Internet (Chang, 2014; Duffy, 2016; Estevez, 2014; Fagan, 2007; Hartmann, 2015; Kawas, 2010; Warburton, 2013).

Interestingly, in twenty-five years of teaching using my own compositions, I have received only two negative responses. The first was from a group of fundamentalist Christian parents who preferred that I not teach a song about the Big Bang Theory, while several families asked me to omit the word “hell” from one song. So, these were issues of religious philosophy or vocabulary rather than musical or overall content.
CHAPTER II

Literature Review

Song composition can be divided into several general categories by its function: the writing of art song, the creation and production of popular song, and songwriting for therapeutic purposes. This thesis presents another classification of songcrafting, that of developing curriculum-based children’s songs for educational use.

This literature review opens by placing the research in context by reviewing the benefits of using song in learning, and briefly investigating educational songs. The characteristics of successful children’s and popular songs are examined. The discussion expands to describe other composers’ approaches and methods, and lastly investigates the differences between writing art song, popular song, children’s songs, therapeutic song, and educational songs.

2.1 Benefits of song in learning

Historically non-literate societies have used song and chant to accompany all important life events and to promote social unity and cultural continuity (Thwala, 2016). This unity and continuity is achieved because song, as a “complex human action” (Lomax, 1959, p. 928) joins music and speech in a special situation to create a communal emotional experience. Sung tales entertain, but also include an educational element as they reflect the social norms and behaviours of the community (Lomas, 2011). For example, folk songs and nursery rhymes teach children about their indigenous culture, laws, and heritage (Mugovhani, 2016).
Music has played an integral role in formal education for millennia. Confucius (551-479 B.C.) emphasised music as one of the six crucial arts in education, second only to ceremonies (Yue, 2008). Plato (c. 428-347 B.C.) believed that music education should begin in infancy, arguing that “Since a child's mind cannot handle serious material, the precepts of the law will be conveyed to him through terms he understands, namely those of play and song” [Laws, 659e2-5]. Song in schools is widely utilised to inculcate religious and patriotic agendas (Abril, 2015), while in countries with large immigrant populations folksongs assist in teaching not only the mother language but also a common, assimilated culture (Abril, 2015; Pawłusz, 2016).

Students with learning disabilities find song is a non-stressful medium for learning, while singing is easier than decoding text for those with dyslexia or low vision (Patel, 2007; Rolka, 2015). Singing is shown to improve student attitudes and socialization in the classroom (Ruokonen, 2015; Welch, 2014) and self-regulation (Kihoro, 2016). At risk students and incarcerated youth also benefit from music education, with lower juvenile crime rates, reduced recidivism, and improved behaviour (Barrett, 2017; Catterall, 2012; Tomasello, 2016).

Song offers a change from routine activity, thereby improving student engagement and motivation. This can be explained by Krashen’s theory of second language acquisition. This theory has five main hypotheses, one of which is the affective filter hypothesis. This states that “affective variables” such as motivation, self-confidence and anxiety play a role in learning a second language. He claims that highly motivated, confident learners will be successful, while those with low self-esteem and motivation and high anxiety have a raised affective filter. A high affective filter forms a
mental block that hinders receptivity to learning (Krashen, 1982). Bhamare defines the affective filter as “the emotional state of the learner at the time of exposure to the language input”, and adds that it is raised when students are “stressed, frustrated, embarrassed, anxious, or bored” (Bhamare, 2011, p. 11). Song reduces student stress levels and lowers their affective filter thereby enabling learning (Akbarpour, 2015).

Song is a widely available and inexpensive tool for learning language both in and out of the classroom (Abidin, 2011; Ariati, 2015). It is commonly used to present and practise vocabulary, encourage listening and imagination, provide a relaxed classroom atmosphere, and to bring variety and fun to the classroom (Eken, 1996, p. 46). Using songs or chant also improves test scores, vocabulary acquisition, and long-term retention (Chuang, 2016; Good, 2015; Park, 2016). With its primary emphasis on listening, song is an appropriate medium to introduce young pre-literate students to another language (Sevik, 2011). Young children particularly enjoy learning language with singing and chanting, movement, and games (Brumen, 2011).

Songs also provide an introduction to colloquial or idiomatic language, the vocabulary of informal conversation (Schoepp, 2001), and can help “to promote automatisation of colloquial language” (Setia, 2012, p. 274). Singing assists in the acquisition of correct pronunciation and conversational skills, as students learn their vocabulary as part of a sequence rather than as single words in isolation (Ashtiani, 2015; Atoh, 2016). Song also provides examples of authentic speech, and teaches correct intonation, word rhythm, stress and pitch (Sevik, 2012). Popular song lyrics tend to be simple, familiar, and conversational, with only 300-500 words in each song at the reading level of a fifth grade native speaker (Murphey, 1992), facilitating second language
The integration of rhyme, rhythm and melody into song has been shown to be beneficial to students’ learning processes and their retention of curriculum (Iwasaki, 2013; Pindale, 2013). Verbal working memory of spoken ten-digit numbers is positively affected by adding the element of rhythm, and repeated rehearsal (Ee, 2015). However, exposure to text that is sung rather than spoken further improves memorisation and recall, particularly with more than one exposure (Campabello, 2002; Legg, 2009; McElhinney, 1996). Language learning and retention is more successful using rhyme and melody, rather than melody or rhyme alone (Bebout, 2017; Lee, 2015).

Song may enhance memory by serving as a “hook” to engage students’ attention, providing novelty and variety (Governor, 2011). Also, brain activity increases in the right hemisphere when singing and the left when speaking, suggesting that multiple neural networks are involving in singing (Jeffries, 2003) and listening to music (Alluri, 2011), thus improving retention and verbal encoding (Peterson, 2007).

As well as improving attention, song is an ideal vehicle for mnemonics, which improve long-term memorisation and facilitate recall (Ashcraft, 2001). Gfeller’s pioneering research in this field (1982, 1983) has been replicated (Coon, 2006; Hayes, 2009; Scro, 2006; Wallace, 1994), finding retention was significantly improved for both normal and learning disabled students, especially in learning a second language.

However, other researchers have observed conflicting results. Some studies found no difference in comprehension and word acquisition between the sung and spoken presentation (Kouri, 2006), and that verbal learning and recall improved only through repetition and rehearsal (Pindale, 2013). A study of word recall accompanied by music
or silence found that if music was played it appeared to have a negative effect on the encoding process (Konantz, 2012), so music may act as a distraction (Ferreri, 2016). University students were better able to recall spoken rather than sung lyrics for a period of up to ten months (Racette, 2007).

There are several possible reasons for these results. Kilgour proposes that rather than melody, it is the rate of presentation that facilitates recall, as the sung version is usually slower than the spoken rendition (2000). As well as tempo or speed, cadence may be a significant factor. Purnell-Webb and Speelman suggest that recall is facilitated by rhythm either with or without melody, as well as familiarity with melody or rhythm (2008). It may well be a combination of musical factors, motivation, and repetition that most effectively enhances learning outcomes.

2.2 Song in the classroom

Studies into the use of song as pedagogy fall into three general categories. The first two involve students passively listening to sung or spoken text either once or with several repetitions. In the third, smaller category, students are actively involved in learning to sing curriculum-based songs. In all three categories, the majority of studies resulted in greater retention and recall for the sung version (Butler, 2008), with repetition further improving learning outcomes and longer-term recall (Sims, 2008).

Recall is the most often cited reason for using songs in the classroom. Achieving recall requires repetition, which is crucial to encoding material into long-term memory (Pindale, 2013), and improves verbal learning and recall. However, English and Visser’s experiments on the relationship between repetition and recall show that “for verbal material at least, changes in long-term memory are most reliably achieved when
repetition is paired with the deliberate use of memorization strategies and deep encoding” (2014, p. 1031). That is, variables including intention, context, and learning conditions can ameliorate the long-recognised detrimental effects of long-term repetition, where added repetition decreases memory performance (Kuhl, 2011). The factors involved in successful encoding and retrieval of information are both “internal, such as motivation, strategies, or prior knowledge, or external, such as the material to be learned, the encoding context, or the experimental instructions” (Ferreri, 2016, p. 174). A deep level of processing manipulation such as semantic processing improves memory performance, as does the way the material is presented, either visual or auditory (Ferreri, 2016).

Music may improve students’ motivation to learn in an appealing context. Adolescents are avid consumers of music, which they use to develop a social identity and peer group and for self-expression (Miranda, 2012), so they are predisposed to listen. ‘Edutainment’ presents appealing educational materials in formats and digital media popular with young people (Anikina, 2015; Qing, 2016). Throughout adolescence there is a steady decline in student motivation and school engagement (Headden, 2015; Smarcz, 2016) that may be reversed through the use of songs in the classroom. Song adds variety and novelty to classroom activities, improving student engagement and motivation (Governor, 2011; Jones-Lewis, 2015; Nadera, 2015), which are essential for meaningful learning (Beasley, 2008; Paas, 2005).

Multimodal presentations incorporating visuals and graphics with song are more effective than a single mode of learning, particularly in student engagement, comprehension, and retention (Kumar, 2016; Sankey, 2010). Using illustrations or graphics with song improves learning results (Akbarpour, 2015; Rocio, 2015), with
animation more effective than static pictures (Stebner, 2016). A student noted, “In music, we had interesting pictures and music….whereas in geography, we just had like words, no pictures and music. It’s very boring. I fall asleep sometimes” (Cheng, 2015, p. 261).

Learning style studies show that students prefer learning through different instruction methods, especially those matching their own perceived strengths (Celik, 2016). Song is an essential component of Howard Gardner’s (1983) musical-rhythmic intelligence, part of his theory of multiple intelligences. These intelligences are linguistic, logical-mathematical, musical, bodily-kinesthetic, visual-spatial, interpersonal (social), intrapersonal (understanding of self), and naturalistic. He suggested that humans each possess a unique combination of these talents and preferred learning modes. Closely linked to linguistic intelligence, musical intelligence is “the ability to be sensitive to music and its components” (Huang, 2016, p. 16). Musical-rhythmic intelligence learners prefer to learn through rhythm, songs, music and sounds (Cismas, 2015).

Other research into different preferred learning styles has led to a variety of learning models and perspectives, such as the VARK (Visual, Aural, Read/Write, Kinesthetic) sensory model. This defines learning style as “an individual’s characteristics and preferred way of gathering, organizing, and thinking about information” (Fleming, 2001, p. 1). The majority of VARK questionnaire respondents are multi-modal, with about 41% having a single style preference, and the others classified as bi-, tri- or quad-modal learners (Hawk, 2007; Shah, 2013).

Though this approach is currently widely accepted in education, several researchers contend that there is not credible evidence to prove its effectiveness (Pashler,
2008; Rogowsky, 2015; Weale, 2017). Gardner has recently written that he “readily admit[s] that the theory is no longer current”, and that he is “no longer wedded to the particular list of intelligences that [he] initially developed” (2016, p. 169). Recent research has found very little evidence to validate the learning styles approach in education (Weale, 2017), while Pashler, McDaniel, Rohrer and Bjork found that there is “no adequate evidence base to justify incorporating learning-styles assessments into general educational practice” (2008, p. 105).

Song uses melody (incorporating rhythm, rhyme and pitch), a variable that English and Visser (2014) did not consider in their study of repetition and recall. Wallace found that recall is facilitated by repetition of melody across verses, and the use of simple and symmetrical melodic structures. She suggests that music acts as:

“a framework for both encoding a text and retrieving a text. At encoding, the melody connects and chunks lines and phrases, which assists in learning. At retrieval, the melody provides a framework that indicates much information must be recalled, where information must be recalled, as well as the order of segments.” (Wallace, 1994, p. 1482)

Calvert (2008) questions the power of songs promoted by Wallace. She notes that learners who sing repetitive songs or sing songs repetitively have enhanced retention of the perceived content. However, errors in comprehension may lead learners to recall incorrect facts. For example, some students change the words to similar sounding or rhyming words, indicating a lack of understanding or processing of the content. She argues “singing provides a reflective way of processing words, though it can stay superficial unless enactive bridges are built to elicit deeper processing of the content”
The classroom teacher’s role would be to provide context and complementary learning materials to accompany the songs, while a multimedia presentation would include visuals and graphics.

The use of original curriculum-based songs created by teachers for their classes and the production and availability of materials online and on CDs is increasing. Using songs and multimedia as supplemental learning materials increases average test scores significantly at all levels of education, primary to tertiary (Ciecierski, 2012; Governor, 2011; Hancock, 1999; Henriksen, 2016; Last, 2009; Lesser, 2015; McCurdy, 2008; Ogunsile, 2016; Scro, 2006; Virani, 2015). Songs written in a popular style present curriculum in a medium that is relevant and appealing to young students. See for example Segal’s (2014) use of rap songs to teach grammar and Carolyn Graham’s (1978) popular Jazz Chants.

Many educators use contemporary songs to teach history as they are “valuable primary sources that provide listeners with direct commentary, attitudes, and emotions expressed by real people in particular time periods” (Binkeiwicz, 2006, p. 516). Burroughs and Hare investigated the use of popular songs to teach about the Vietnam War, describing them as “tangible history” and “voices from the past that are just as valuable as a book” (2008, p. 72). However, using songs to teach history raises the issue of whether to use original lyrics and music of the era or newly composed songs, as current interpretations may not reflect historically accurate perspectives and attitudes (Whitmer, 2005).

Crowther has written and collected a wide range of science-based songs which are available online as music videos, finding that knowledge and comprehension improved
significantly through their use (2012; 2013; 2016). Though musical and non-musical videos achieved similar test results, students preferred the music versions, so were more likely to watch them again. A different music/non-music video test comparison observed that the immediate test results were higher for the non-music group, but that the music group scored higher than the non-music group in a delayed post-test 28 days later.

In British Columbia, original songs have been used over a period of seventeen years to teach social and environmental aspects to mining engineering students with a new song each week (Cheng, 2015). Student survey responses about the effectiveness of using song were overwhelmingly favourable, particularly for engagement in the class and improving memory (Veiga, 2015; Xavier, 2009).

Song can be used as an “organizational mnemonic device” (Crowther, 2012, p. 26) to teach science subjects in the English language. Yeoh (2014, 2015a, 2015b) found that the musical mnemonics consolidated students’ memory processes and enabled them to learn sequenced materials in the correct order more successfully than the control group. Students at Monash University were asked to rate classes where chemistry was taught through songs. They reported the songs were enjoyable (87%), that songs lowered their stress levels (86%), that they were more engaged in the class, the songs were helpful as a study tool (77%), and songs improved retention (67%) (Yee, 2015).

This data confirms that song is a valuable pedagogical tool to enhance recall and retention. Song improves student engagement, lowers the affective filter that negatively impacts learning, and boosts recall through repetition. Music enhances encoding and retention of information through the use of rhythm and melody, and repetition.
At present there is little research into the process of creating curriculum-based songs for young singers. This study investigates not only the elements and characteristics of children’s educational songs, but also the craft of songwriting in this genre through autoethnography.

Next I define creativity and four models of the creative process, and discuss how musical composition aligns with the stages and activities of general creativity. I then describe other composers’ writing methods, and how constraints are a common factor in songwriters’ work.

2.3 Creativity

From early cave paintings in Australia that date from over sixty thousand years ago to the twenty-first century “selfies”, humans have created art to express or record events and emotions. Art, painting, sculpture, literature, music and song communicate thoughts, facts and feelings that can be experienced by others both immediately and over time.

Rooted in the Latin word creare, meaning to make or produce, creativity is generally seen as a process of imagination and exploration with a tangible outcome or product. Creativity has been defined as “the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a new method or device, or a new artistic object or form” (Kerr, 2016), and “the process of having original ideas that have value” (Robinson, 2014, p. 205). Definitions of creativity vary according to the particular discipline involved (Repko, 2008). For example, the term “creativity” is used in the arts, humanities, and social sciences, “invention” in the applied sciences, “discovery” in the natural sciences, and “innovation” in technology and business
(Spooner, 2004). However, Vernon’s definition is applicable to all areas of human endeavour:

“Creativity means a person’s capacity to produce new or original ideas, insights, restructurings, inventions, or artistic objects, which are accepted by experts as being of scientific, aesthetic, social, or technological value. In addition to novelty as our major criterion, we must incorporate in our definition the acceptability or appropriateness of the creative product, even though this valuation may change with the passage of time.” (1989, p. 94)

In 1926 Wallas developed a four-stage model of the creative process, involving preparation, incubation, illumination, and verification (Runco, 2014). While he placed these in sequence, he also noted that the individual could return to each stage as necessary (Truman, 2011), a process that is termed recursion (Runco, 2014). Each of these stages involves different activities. The preparation stage identifies and defines the problem, and gathers information. Incubation is the unconscious processing of the problem, which allows for recovery from fatigue, intermittent conscious work, and the adoption of chance data. Illumination is also known as insight, or the “a-ha” moment of solving or answering the problem. Verification tests the validity of the solution in a conscious and deliberate effort (Wallas, 1926/2014).

Another four-fold concept of the creative process is termed the “Four P’s”, namely the Person, the Process, the Press (or environment), and the Product (Rhodes, 1961). The person can be defined as understanding the personality, intellect and attributes of the creative person, while the process describes their motivation, perception and stages of thinking. The press is the relationship and context between humans and
their environment, and the product is the tangible expression of creativity and its outcomes and qualities (Rhodes, 1961).

Like Wallas, Sadowski and Connolly describe the stages of creativity as the “definition of the problem, research or collection of data [preparation], incubation, insight or illumination, and evaluation, verification, or elaboration [verification]” (1999, p. 21). They note “creative thinking has often been described as divergent thinking, or looking at problems from a different point of view than ordinarily used” (1999, p. 20).

López-González agrees, writing, “During any creative act…ideas or past experiences are combined in novel and significant ways via the interaction of such cognitive capacities” as “reasoning, representation, association, working memory, and self-reflection” (2012). She states that creativity is a combination of four psychological processes. The first phase is the deliberate cognitive, which involves inventiveness that comes from sustained work in a discipline. The second is the deliberate emotional, that relates to positive emotions of success or satisfaction as motivation to work. The spontaneous cognitive is the “eureka!” or “a-ha” moment, which typically occurs when one directs one’s attention to a different task, and the brain connects information in novel ways via unconscious mental processing. Last is the spontaneous emotional stage, which is usually referred to as an epiphany, and occurs when neural activity in the amygdala is spontaneously represented in working memory.

The commonalities between these creative process models have become increasingly sophisticated over time, as tabulated in Table 1. However, they differ in several aspects. Several do not include the incubation or unconscious problem-solving stage. Rhodes focuses particularly on the person of the researcher/creator, while López-
González separates the activity of work from the emotions leading to motivation, and omits the verification or production final stage as part of the process.

| Table 1 Relationship between 4 different models of creativity |
|---------------------------------|---------------------------------|---------------------------------|
| Wallas, 1926                     | Rhodes, 1961                     | Sadowski and Connolly, 1999     |
| Person                          | Person                          | Person                          |
| Preparation identification and definition of the problem, and gathering of information | as understanding the personality, intellect and attributes of the creative person | definition of the problem, research or collection of data, gaining knowledge |
| Incubation                      | Process                          | Incubation                      |
| unconscious processing of the problem, which allows for recovery from fatigue, intermittent conscious work, and the adoption of chance data | motivation, perception and stages of thinking | letting the problem simmer in the background |
| Illumination                    | Press                            | Insight, illumination           |
| insight, or the “a-ha” moment of solving or answering the problem | the relationship and context between humans and their environment | the “a-ha” experience |
| Verification                    | Product                          | Verification                    |
| tests the validity of the solution in a conscious and deliberate effort | the tangible expression of creativity and its outcomes and qualities | evaluation, verification, or elaboration, to test, examine and revise the solutions |
| Spontaneous cognitive           | Spontaneous emotional            |                                 |
| the “eureka!” or “a-ha” moment | an epiphany that occurs when neural activity in the amygdala is spontaneously represented in working memory |

The definition of creativity used in the current study is very similar to Sadowski and Connolly’s description. It diverges from this model in that it combines the two phases of incubation and illumination in a recursive process, and lastly presents the songs
themselves as a tangible product of the creative process.

It is a deliberate sequence of activity, beginning with the identification and definition of the problem or task. The next phase is the investigation and collection of data, followed by a recursive cycle of incubation and conscious work, accompanied by illumination or flow. The final phase is the production, evaluation and refining of the artifact.

While creativity is a constant element in human progress, it is frequently affected or directed by circumstances. In the area of the arts, creativity is shaped and formed by constraints or requirements placed upon the practitioner by their patrons or circumstances. Such works include the sculptor Michelangelo’s commissions to paint the Sistine Chapel artworks (Katz, 2009), Bach’s more than three hundred cantatas for the weekly services in Leipzig (Jones, 2013), Domenico Scarlatti’s 542 harpsichord sonatas for his keyboard pupil the Crown Princess of Spain (Kirkpatrick, 2016), and Mozart’s piano concertos composed for performance during the Lenten season when opera houses were closed (Baumol, 1994; Holoman, 2003).

2.4 The composition process

Western musical vocabulary originated in the medieval and Renaissance dance forms that established the first frameworks for secular music (Stein, 1999). Standard “classical” musical structures were later developed which have endured for centuries, such as concerto, sonata, symphony, lied, and opera (Grout, 1988; Van der Merwe, 2004). Within each genre, certain conventional forms and musical “maps” were established, as composers incorporated current successful trends and styles that were popular with audiences.
In classical music composition students analyse and compose in the style of successful music of previous eras to develop skills and a musical lexicon for their own work. Interestingly, Stravinsky (1947) points out that the formal “rules” of structure and harmony of the classical period were posthumously applied to composers’ works, rather than formulated and consciously adhered to at the time. That the music of each period by different composers was similar in style with only incremental rather than extreme innovations illustrates the influence of contemporary patrons’ and audiences’ musical tastes.

The challenge for artists, writers, poets and composers is to create works that will appeal to their audience, yet incorporate enough sufficiently different material to be innovative and engaging (Saindon, 2008). In classical “art” music, new pieces that resemble other composers’ works or styles are considered inferior, being judged principally for their originality and stylistic innovation (Hamm, 1997). In contrast, successful popular music generally conforms to current musical taste and conventions, which audiences find familiar and appealing.

Most creativity is not the production of a completely new and unique artifact, but rather, a re-assembly or re-combination of components. I contend that creativity is not solely a by-product of intelligence, inspiration or knowledge, but is found at the intersection of preparation (skills, experience and knowledge), and purpose (inspiration or commission).

An example of this intersection is Mozart’s “Linz” symphony, composed in 1783 in just four days. When Mozart arrived in Linz to stay with friends he wrote to his father, “I am giving a concert in the theatre here and, as I have not a single symphony with me, I
am writing a new one at breakneck speed, which must be finished by that time” (Mozart, 1783/1990). Another perhaps apocryphal story recounted by Davis, Frechette and Boswell (2013, p. 131) tells of a woman who approached the famous artist Picasso in a Parisian café and asked if he would sketch her. He agreed, studied her for a moment then quickly drew her portrait. She was delighted, until she asked him how much she owed him, and he replied “Ten thousand francs, Madame”. She was outraged, saying that it took him only a few seconds to produce the artwork. He replied, “Madame, to be able to do that – it took me my entire life”.

While some may argue that writing curriculum-based songs is not creative, Dowd describes “True creativity [as] invention, or the process of making something new”, though the activity or product may “build to some extent on previous activity” (1989, p. 233). Gabora argues that creative thought “often incorporates ingredients from beyond the domain in which it is eventually expressed…forging…new associations amongst concepts and percepts that potentially come from disparate domains” (2015, p. 6).

Amateur and professional songwriters differ in their process of composition. Professionals tend to first decide on the theme and design the overall structure (preparation), then add the details (incubation and illumination), writing several parts at once, or vertically, while novice composers generally start without an overall plan or direction, and write one part at a time, or horizontally, developing musical ideas then combining them (Broeker, 2006). This would correlate with López-González’s deliberate emotional psychological process, where the positive emotions linked to success or satisfaction provide the motivation for creativity. Collins (2005) suggests that most composers create in a non-linear fashion, combining an overall musical framework with
constant reflexivity and small-scale edits and revisions, conforming to the recursion phase of creativity.

Mapping music composition against the general definition of creativity evokes preparation / productive mood, incubation / musical conception, illumination / sketching, and verification / composition (Andrews, 2004). From another perspective, the composition process involves “aesthetic reflection, review of background literature, musical analysis informing technique or aesthetic, reflection on the creative act, documentation of creative process, analysis of ethnographic fieldwork data, and experiments relating to materials and process” (Hannan, 2004, p. 1).

Bennett (1976) interviewed eight professional composers of classical music to investigate their creative process. He found a common pattern in the development of a new piece: first a “germinal idea” which was sketched out, followed by a first draft (preparation and incubation). This was then refined and elaborated until the final version of the work was completed and published (illumination and verification). Reynolds describes a less structured process, writing “rather than being suddenly revealed, whole, a musical work is achieved gradually over time in a manner that doubtless varies for each composer: part discovery, part construction, even, admittedly, part contrivance (and…also part sheer undirected bumbling)” (2002, p. 4).

As with the models of the general creative process, there are similarities and differences in these three models of musical composition (see Table 2). Bennett adds a preliminary stage of the “germinal idea”, with the generation of the first musical materials, and includes preparation as part of the incubation phase. Andrews does not include recursion in his model, perhaps believing that it is part of his verification stage of
composition. He includes sketching as part of the illumination phase, whereas Bennett places it as the first step. For all three models, preparation, incubation and verification are placed sequentially, though Hannan incorporates several other activities in his recursion phase, and specifically mentions experimentation.

<table>
<thead>
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<th>Table 2 Three composition process models</th>
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<tr>
<td><strong>Germinal idea</strong></td>
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<td>first sketch(es)</td>
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<td><strong>Incubation</strong></td>
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<td>first draft and preparation</td>
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<td><strong>Recursion</strong></td>
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<td>refinement, illumination and</td>
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<tr>
<td><strong>Verification</strong></td>
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<td>completion and publication</td>
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Studies suggest there are two fundamental types of composer, through either inspiration or work / craft (Andrews, 2004). Mozart, Haydn and Schubert are often cited as composers who heard entire works in their minds prior to writing them down, the so-called “inspirational” composer model. However, Mozart also made preparatory “sketches”, with about 320 examples still extant for about 10 percent of his works (Konrad, 1992). He wrote to his father in 1778, "You know that I immerse myself in music, so to speak - that I think about it all day long - that I like experimenting - studying - reflecting" (Mozart, 1865, p. 247). Schubert also revised his scores multiple times (Vanderburg, 2011).
This state of intense focus and inspiration is termed “flow” by Csikszentmihalyi, who describes it as a stream of actions with little conscious input from the subject, where time seems to be suspended, or “the holistic sensation that people feel when they act with total involvement” (1975, p. 36). Music triggers flow more frequently than other activities (Lowis, 2002). Csikszentmihalyi codified creativity as “a system comprising (1) the creative individual, (2) the domain (the class of knowledge or activity that makes up a culture or any area of specialization…), and (3) the particular field of practice” (Kerr, 2016).

People who experience flow have “autotelic” personalities, “composed of opposite personality traits, such as curiosity and persistence; the ability to concentrate deeply but also to be open to novelty; and independence in conjunction with cooperation” (Chirico, 2015, p. 3). Creative people tend to be independent, introverted, open, intuitive, flexible (Dellas, 1970), less conventional, and more self-confident, ambitious, driven, and impulsive (Feist, 1998; Fink, 2014).

Mastery of the creative domain is essential, requiring education, training, resources and practice (Kerr, 2016). The expertise acquisition approach states “most forms of expertise [are] the results of vast amounts of knowledge and pattern-based retrieval mechanisms acquired over many years of experience in the associated domain” (Ericcson, 2014, p. vii). Preparation is key to successful creativity, as is expressed in the “ten-thousand-hour rule”. This is based on studies that found that at least a decade of practice is required to achieve mastery and peak productivity in many fields (Bruton, 2012; Gladwell, 2008; Levitin, 2007), though artists tend to take twenty years (Kaufman,
Many songwriters began their lyric-writing process as children, writing poetry before composing music (Negus, 2015).

Other composers use the “craft” model, writing sketches and rough drafts to generate musical ideas, melodies and harmonies, experimenting and developing these over time into the final version of a work. Beethoven is the most famous example of this type, writing over 10,000 pages of sketches that still survive (Cooper, 2017), some of which he worked on for decades (Johnson, 1985). Brahms wrote, “You must learn how to work. You must write a lot, day after day, and not think that what you are writing always has to be something significant. As far as songs go, you will write many songs before a usable one emerges” (Solomon, 2006).

Composers use many different songwriting techniques. Some begin the process with improvisation, such as Haydn (Fisk, 1997) and many popular songwriters and bands (Turitzin, 2009). Improvisation is considered to be a separate process from composition, which is written, rather than performed, and usually involves revision (Larson, 2005). However, many composers utilise improvisation as a catalyst for composition, and will cycle between notated and exploratory phases of musical exploration (Rose, 2016).

Songs are frequently created through collaboration between lyricist and composer. Lyricist Oscar Hammerstein wrote that there is “no invariable or inevitable method for writing songs. Sometimes the words are written first, sometimes the music” (Hammerstein, 1985, p. 3). When adding lyrics to music, he noted that often the music suggested a “mood or…train of thought that results in an unusual lyric” (Hammerstein, 1985, p. 7).
The successful Broadway composer Stephen Sondheim also began his career as a lyricist. He varies in his approach to songwriting, writing lyrics or music first, and describes the songwriting process as follows:

“A refrain or an opening line will often suggest a melodic idea, which I will then go to the piano and test. About 20 percent of the time, it comes out to be something I've already written. About 20 percent of the time, it's something somebody else has written. And then every now and then - the other 60 percent - it's something to build on. That's one way a song happens.

The other way it happens is to sit at the piano with a page of dialogue that I'm trying to work the song into - along with any notes I may have - and just kind of read or hear music and start to fiddle at the piano until something occurs to me. It might just be punctuation or some underscoring. And often in those punctuations will come a suggestion of a whole musical atmosphere. And once you have a musical atmosphere - which could be anything from a running figure to a chord change - you have a way to start some melodic ideas. They're not related to a conscious lyrical phrase, but it gives you a basic melodic rhythm and that can spring into other things.” (Freedman, 1984)

Irving Berlin started out as a singing waiter who created parody versions of popular songs before becoming a lyricist, then a composer. He composed over a thousand songs in his long career, averaging four to five songs a week, though only ten percent of these were actually published (Hamm, 1997). Berlin described the advantages of writing both lyrics and music:

“Nearly all other writers work in teams, one writing the music and the other the
words. They either are forced to fit some one's words to their music or some one's music to their words. Latitude - which begets novelty - is denied them, and in consequence both lyrics and melody suffer. Writing both words and music I can compose them together and make them fit. I sacrifice one for the other. If I have a melody I want to use, I plug away at the lyrics until I make them fit the best parts of my music and vice versa.” (Berlin, 1915, p. 100)

Technology has emerged as an important tool for composers. Increasingly powerful computer hardware and sophisticated software have enabled even amateur musicians to produce and publish compositions at a level far more advanced than their actual musical and theoretical training, as a composer’s knowledge has become virtualized (Keislar, 2009). Notation software programmes also provide a rapid way of entering and printing music, with immediate playback (Hilvert, 2006; Rudolph, 2004), innovative digitally generated timbres and textures (Holmes, 2015), and editing options which allow ideas to be continuously tested and revised, as well as saving time by automatically generating parts and high-quality scores (Hosken, 2014). As Holmes notes,

“Computers and software fill several possible roles for the composer, including composition, scoring, synthesis, audio analysis, processing, sampling, and networking with other devices. Computational thinking has always been a component of the composer's method, no matter what the era, style, or genre of music.” (2015, p. 489)

2.5 Conclusion

Songs are created for different purposes through a variety of methods, but almost invariably within an appropriate cultural framework and structure. Commercially
successful songs tend to adhere to a formula, though this of course does not mean that any song using that template will automatically be popular or successful.

There has been little systematic exploration of the process of songwriting and crafting. Models of creativity outlined in this chapter indicate that composers generally follow the stages of general creativity of preparation, incubation, illumination and verification. Songwriters who conform to the craft or work model include an extended recursion phase of analysis, assessment, revision and refinement. It is this verification phase of evaluation and elaboration (Sadowski, 1999) that is of particular interest in this research, which investigates the creative process by examining how my work process has developed over time, and the influences that led to those changes. This research also examines the constraints of writing curriculum-based songs for children, with its inherent curricular parameters and the limited vocal range and capabilities of young singers.

The next chapter reviews the elements of children’s songs, and contrasts the purpose and function of different song genres: art song, folk song, popular song, therapeutic song, and educational song.
CHAPTER III

Anatomy of Children’s Songs

3.1 Characteristics of classroom songs

If, as described above, songs are useful tools for building memory and enhancing recall, they require a number of characteristics in order to be most effective. As a result of English and Visser’s (2014) study composers now know that songs need to explicitly provide a context, a reason, for the students to learn. They need to be purposeful in the long and short term. Also, songs should appeal to sophisticated adolescent consumers.

Wallace (1994) has examined the features of songs that teach. Melodic contour should be symmetrical, and rhythmic complexity simplified. The melody should be catchy and suit the lyrics. Indeed, students report, “the facts most easily recalled were those rehearsed to melodies reminiscent of songs they previously knew or liked” (Gfeller, 1986, p. 29).

“Catchy” songs are found to contain “hooks”, usually at the intersections of musical sections (Burgoyne, 2013). “Hooks” invite the listener’s attention, and “involve musical features such as rhythm, melody, and harmony, as well as production decisions such as editing and mix” (Kaneshiro, 2017, p. 13).

Students report that they are more engaged by music than the usually “boring” classroom, and that songs are “fun” and “cool”, “the tunes and the lyrics just stay in my head and don’t go away”, and that “rhymes [are] easy to remember” (Cheng, 2015, p. 264). Students prefer songs that are “simple and catchy” and “short and sweet and to the point” (Governor, 2011, p. 174), and often think of singing as entertainment and fun,
rather than formal study (Nadera, 2015). This frequent exposure and rehearsal is particularly helpful for young students, who require repetition and revision for memorization (Millington, 2011; Vidovic, 2016).

The most effective songs and chants for teaching use consistent rhythm structures and strong rhymes, and incorporate repetitive melodies (Gfeller, 1983). Repetitive priming, or repetition of a stimulus, improves processing fluency, leading to a positive response from listeners, though it should be noted that over-use of repetition could have a negative effect (Nunes, 2015). Careful attention to matching the melody either in notes and number of syllables, word accent and rhythmic structure, or melodic intonation are further important considerations. In performance the lyrics should be understandable, sung clearly with good diction at a reasonable speed (Beasley, 2008). The sound quality or clarity of lyrics on the recording can also impact learning (Wallace, 1994).

Songs composed for teaching generally conform to popular musical styles preferred by students so that students will find them appealing. The most popular musical genres are rap, and rhythm and blues (Winter, 2009), though different ethnicities identify more strongly with music from their own culture (Brittin, 2014).

Educational songs are usually diatonic with mostly conjunct (stepwise) melodic intervals, major in tonality, use typical speech patterns such as iambic pentameter, and simple rhythms (Legg, 2009). Their musical style has essentially not changed since the successful educational television programme for young children Sesame Street debuted in 1969, remaining “melodic and simple with a jaunty beat” (Murray, 2015, p. 42).

Indeed, Marsh (2008) points out children’s classroom song styles are still based in large part on music pedagogies developed in central Europe in the early twentieth century.
by Carl Orff and Zoltán Kodály. Based on contemporary children’s play and culture, these promote the use of short, repetitive folk or folk-like songs with simple rhythms and a small melodic range, accompanied by movement. However, children today are exposed to a far wider and more sophisticated auditory experience, with migration and technology introducing new ethnic influences and musics to children’s culture (Marsh, 2008).

Children’s playground singing games are rhythmically complex, often incorporating syncopation, triplets and polyrhythms, and melodies that sometimes include chromaticism or unusual scale patterns (Campbell, 2010).

3.2 Songwriting genres

Effective songs (and songwriting) follow certain parameters and guidelines, which vary depending on their function and purpose. There are several general categories of song and song composition.

Art song combines poetry and music. This genre differs from popular song in that it is purposely innovative and is nearly always based on existing poetry. Art song tends to be written by serious “classical” composers, and is usually scored for solo voice and piano. The main function of art or serious song is to be expressive, so the composer uses harmony and texture to “create mood, reinforce drama, or illustrate poetic elements” of the lyrics (Kimball, 2013, p. 15). Romantic lieder composers such Schubert, Schumann, Wolf, Brahms and Strauss communicated the poem’s inner meaning and psychological insights through the use of colourful harmonies and modulations, unexpected intervals and rhythms, and evocative accompaniments (Stein, 2010; Grout, 1988).
English folk song collector Cecil Sharp (1907) defined folk song as a musical tradition that includes continuity with the past, variation over time by different singers, and selection or adoption by the community of these modifications over time. Authorship is both anonymous and communal, as folk songs are passed on by oral transmission. They evolve over time, with multiple variations or versions (Howes, 2015), often replacing lyrics in old melodies (Jackson-Houlston, 2016).

Folk songs generally are short, repetitive, and strophic (with repeated verses), with a narrow melodic range (Alves, 2013; Henigan, 2015). Folk song has been revived for both nationalistic and commercial purposes and has become a popular musical genre (Bohlman, 1988; Brocken, 2017; Laxer, 2016; Tönsing, 2017). Some contemporary composers write in a folk music style, with such typical characteristics as acoustic performance on traditional instruments, ballad or narrative song genres, repeated verses of usually four lines, language-based metre and rhythms, pentatonic and diatonic scales, and predominantly major tonality (Nettl, 1965, 2014). Use of these folk music stylistic elements can identify a song as part of a particular culture or time period.

Another song genre is therapeutic songwriting, described as “a music therapy intervention to address emotional, communicative, cognitive, psychological or social needs of an individual or group of individuals” (Baker, 2017, p. 437), where patients compose new music in collaboration with a music therapist primarily to express themselves and engage with their emotions and experiences (MacDonald, 2013). It is commonly used to treat depression, grief, autistic spectrum disorder, developmental disability, eating disorders, cancer, dementia, and traumatic brain injury (Aasgaard, 2016; Baker, 2013). This genre adopts composition techniques such as parody or lyric
substitution, rap, improvisation, and song collage, which borrows lyrics and arranges them into a new song (Dalton, 2017).

In contrast to art and folk songs, where lyrics and music are written separately over time, Western popular song lyrics and music are written synchronously. They generally adhere to established general characteristics in order to be commercially successful. These are described in the next section.

### 3.3 Characteristics of successful popular songs

Most successful songs from the pop music charts from the last fifty years are major in tonality (sound “happy”), have four beats in each measure (4/4 time), a medium speed or tempo of around 120 beats per minute, are danceable (strong beats and stable speed), and have a loud volume level (Ellis, 2010). Popular songs usually utilise only three chords for harmony (Hamm, 1983), with C major the most common key (Lindvall, 2011). Song length has varied by less than a minute over fifty years, averaging 4 minutes. Usually the repeated chorus contains the highest melodic pitches, while melodic range is generally within the two-octave range of C2-C4, particularly A2-A3. The most common form is verse and chorus, or AABA, with phrases based on four bars (4, 8, or 16 bar phrases). The instrumental introduction is short, normally less than twenty seconds (Bennett, 2014). A song can be unified by the use of melodic, rhythmic, or harmonic repetition to create stability.

Melody is the organised linear sequence of single notes through a musical work, a combination of pitch and rhythm. Melodies are often constructed from a simple two or three note pattern or “motive”, which can be repeated, expanded and developed. Successful song melodies are predominantly conjunct or stepwise in movement, with
occasional larger intervals to generate energy and interest (Ewer, 2014). Strong melodies possess a “balance between the elements of variety, or surprise, and predictability, or continuity, through repetition and other devices” (Hellmer, 2005, p. 66). Such devices include the hook and the “riff”, a short pattern repeated against other changing musical elements (Shuker, 2016). Popular song chorus melodies tend to be higher in pitch than the verse, to build energy and intensity (Owsinski, 2013).

Some composers such as Copland (2011) feel that rather than melody, rhythm is the most important element of music. Rhythm is the interplay of the beat, or musical “pulse”, with patterns of varying durations. In lyrics, words create rhythmical patterns that can be repeated with different syllables for a rhythmic “rhyme” or motive. The prosody or voice inflexion of speech transfers to song, with typical word stresses, intonation patterns, rhythms and pitch profiles changing for different languages (Andreeva, 2014; Hannon, 2016). Songs for children tend to display more rhythmic regularity than adults’ songs, perhaps linked to the rocking motion accompanying infants’ songs and lullabies (Hannon, 2016).

Rhyme is the use of similar sounding words or final syllables, usually at the end of a line of poetry or lyrics. There are various types of rhymes used in song lyrics as Sondheim notes: “true rhymes, near rhymes, visual rhymes, regional rhymes, assonance, consonance, run-on, and identities” (2010, p. xxv). Rhyme schemes or structure can vary, though it is most commonly written in couplets or pairs of lines. These can rhyme in pairs (aabb) or as enclosing rhyme (ABBA) (Mayer, 2008, author’s emphasis).

*Perfect rhyme* exactly matches the words’ end sounds (great/state, “Hieroglyphs”). *Eye rhyme* word pairs sound different though they look the same when
written (rough/though). Other rhyming devices are *assonance*, where the vowel sound is the same (equal/people: “Democracy”), *consonance*, where the consonants sound the same (pitter/patter), and *alliteration*, where the words begin with the same sound (veni, vidi, vici: “Julius Caesar”) (Finch, 2002, author’s emphasis). *Composite or mosaic rhyme* uses two or more single words in pairs (incubator/citystate, a: “Democracy”) (Kislan, 1995, emphasis added).

Form is the structure of a composition, usually AABA, verse and chorus, or call and response. Structure can provide continuity or variety, and add expressive emphasis (West, 2016). Song phrases are typically less than nine seconds in length (Savage, 2015), perhaps to facilitate performance in one breath. Verses typically add detail or expand on the repeated chorus (West, 2016). There are simple and contrasting verse and chorus forms, where the first uses the same harmonic progression for both verse and chorus but not necessarily the same melody, and the latter uses a different harmony and melody for each section (von Appen, 2015). The term “chorus” replaced the term “refrain” as American minstrel shows used a chorus, often in four-part harmony, for the repeated refrain between the soloist’s verses (von Appen, 2015).

Irving Berlin, the composer of over 1,000 songs, writes that choruses need a “punch” near the end and that “short verses put the singer into the chorus and the song-idea quickly…all my songs run to long choruses…Short choruses, I argue, are over too quickly; they don’t carry enough sustained interest” (1915, p. 103). He also notes the importance of rhythm, originality in melody and lyrics, as well as humour, writing, “Music, you know, can be just as funny as the lyrics” (1915, p. 103).
3.4 Composing children’s songs

Children’s educational song composition is a specialised creative field. The majority of children’s educational songs are written for very young children to help pre-literate students learn basic information such as numbers, colours, and days of the week. While many writers think that children’s songs should be very simple, a significant portion of the market is aimed at the entire family. The songs need to be “sophisticated enough to capture an adult’s interest while being lyrically appropriate and relevant to children”, such as Disney movie soundtracks (Blume, 2006, p. 195). When asked about writing for children, award-winning composer Andrew Lippa said, “It was really only the text that was geared towards children. The music was incredibly sophisticated” (NYCC, 2015).

As previously noted, children’s songs usually consist of short phrases in a call and response pattern to enable learning and memory, and to suit young children’s small breath capacity (Atoh, 2016). Many children’s songs use simple or monosyllabic words and frequent repetition (Millington, 2011). This frequent reiteration of words sung at a slower tempo (speed) than speech and repetitive structure helps develop vocabulary and fluency (Majzini, 2016; Vidovic, 2016).

Gonzalez (2016, p. 14) analysed twenty-one well-known European nursery rhymes for intervals, metre, phrase length, harmonic progressions, and melodic contour. Of the 750 intervals found in the examples, 252 were unisons (repeated notes) and 237 were major seconds (single step ascending or descending). 65% of the nursery rhymes used only two intervals. The metre, or number of beats in each bar, tended to be duple or two strong beats (42% in simple quadruple / four beats, 10% in simple triple / three beats, 19% in simple duple / two beats, and about 29% in compound duple / two slow beats).
Almost 60% of the songs used mostly two-bar phrase lengths, while a further 29% used primarily four-bar phrases. Harmony was very simple, with predominantly I-V-I harmonic progressions. The melodic contour varied considerably, but 57% started with an arch (either descending then ascending, or ascending then descending) and 66.6% used a descending phrase to finish.

Teachers who are not musically confident often use well-known melodies, with new, curriculum-linked lyrics, known as “piggyback” or parody songs. Tom Lehrer’s “The Elements” song is a popular example, where he used the melody of Gilbert and Sullivan’s patter song “I Am the Very Model of a Modern Major-General” to list all the scientific elements (Lehrer, 1981). An updated and expanded version of “The Elements” uses Jacques Offenbach’s “Infernal Galop” melody (AsapScience, 2015; Bishop, 2013; Davis, 2013). Another frequently taught parody song is the award-winning “American Pi” that teaches the mathematical concept and history of “pi” (Lesser, 2015). Using parody song provides variety in classroom activities, lowers the affective filter, and improves student motivation and learning outcomes (Boothe, 2015).

While these “parody” educational songs are popular, this can lead to later confusion as to which lyrics to sing (Serafine, 1986). On the other hand, Gfeller (1982) found that students’ recall was greater when familiar melodies were used, perhaps because there was less new information to process (Hayes, 2009).

Depending on the age of the students, their vocal range will vary (Kim, 2000). Many educators recommend that using the key of D is best suited for young singers’ vocal range, with a comfortable range (tessitura) of six to eight notes (Phillips, 1992). When teaching boys whose voices have deepened, the songs must be in a range that can
be sung by both trebles and baritones. Research shows that boys often feel that singing is for girls and will not sing in class (Warzecha, 2013). Ashley has found that a passionate and enthusiastic teacher can overcome such attitudes (2013), and that if all else fails, the song can be taught as a rap, as rap is a “potential escape route from singing that saves masculine face” (2015, p. 122).

Melodies should be mostly stepwise / conjunct, and avoid awkward or large intervals. The rhythm patterns of the lyrics should be uncomplicated, so that children are not struggling to enunciate rapid or difficult syllables. Phrase lengths should take into account the smaller lung capacity of young singers, with either short phrases, or rests within the phrase for breaths. Melodies that are symmetrical and simple lead to better text recall (Ferreri, 2016). Most children’s songs are syllabic, with one note per syllable, rather than melismatic, where one syllable is sung over several notes, and their phrase length is consistent, usually two or four bars long (Wassink, 2011).

The tonality should be appropriate to the lyrics, so that if the subject is “happy”, the music will be in a major key, or minor if the subject is “sad”. If writing a series of songs on the same subject, using only one tonality can become tedious, so it is possible to write a song in the opposite tonality, but illustrate the theme using interesting rhythms, alterations in tempo, or unusual instrumental colours in the accompaniment.

Fisch (2014) points out the challenges in writing songs to teach. He notes that song structures, meter, and lyric rhyme schemes restrict the choice of words, and that a steady tempo prevents flexibility in presentation speed, for instance slowing down when singing about a complex issue as one does naturally when speaking dialogue. Also, he notes that
placement of information is crucial. The most important content should be presented in
the chorus, so that repetition will enhance reinforcement and retention.

Cashman (2014) wrote about his process of writing ten educational songs, which
followed the model of research, writing, collaboration, fundraising, then recording and
marketing. He writes:

“Typically, while writing a song, I look for syllabic flow, even if the rhyme pattern
doesn’t match from stanza to stanza. If there is a flow, something easy to sing and
remember, I keep it. I keep it because that is likely what listeners will remember
too. In my case, it is imperative that listeners remember lyrics! When I think about
it, the only purpose [for] music behind the lyrics…is [as] a vehicle for these lyrics
to travel from speaker to memory. In other words, it’s equally imperative that the
music is catchy, but only to act as the glue binding the lyrics to the memory.”
(2014, p. 9)

Lynn Ahrens is a music theatre composer who has also written songs for the educational
television show “Schoolhouse Rock”, and remembers:

“I think one of the great things is you’d have three minutes to write a song.
Literally…it was two minutes and fifty-eight seconds. Having worked as a
copywriter and as a jingle writer and a “Schoolhouse Rock!” writer, those kinds
of restrictions are often wonderful. ‘Cause it makes you pay attention to every
single word. It makes you pay attention to the arc of the song, and make sure it
has a beginning, a middle, and an end. Every song takes on tremendous weight in
terms of what it’s saying, because of its restrictions in time. That has served me
well in my current incarnation as a theatrical lyricist.” (NYCC, 2015)
This time constraint is also a challenge as the writer is forced to condense their work. Former poet laureate Billy Collins notes that “interesting things happen under compression” (2016), as in writing poetry such as haiku with only seventeen syllables in a rigid 5-7-5 syllable form, sonnets with fourteen lines of ten syllables, and also the modern tweet, with a limit of 140 characters.

Brad Mossman and Bob Boyle have collaborated on over sixty children’s songs, including eight for Sesame Street, as well as writing songs for adults. Mossman describes the key elements of popular children’s song as simplicity, humour, energy, and high pitch (2014). He writes that his partner’s lyric writing process is:

“to just go for it with stream of consciousness and write everything he can down, then send it all to me to edit, change, add to, subtract from, etc. As I start to create what feel like verses and choruses, I then begin to hear his words as melodies in a rhythmic pattern. I play these sounds in my head over and over for hours or days (!!!!) until I get a first draft to send back to Bob. We continue this back and forth until we both agree, and a final version is imminent.” (Mossman, 2014)

In summary, successful children’s songs share certain characteristics. Traditionally, effective children’s educational songs use simple, symmetrical melodies, uncomplicated rhythms, a limited melodic range, and conform to popular styles. They often utilise hooks, strong rhymes, and repetition of melodic or rhythmic patterns. However, while lyrics need to be age-appropriate and relevant to the age group, children’s songs can also be sophisticated and rhythmically complex. Next I present the second “cup of tea” vignette, which dates from early in my research journey.
Several months into the project, I sat down for a cup of tea with my best friend, another teacher who was also pursuing a higher degree. We sipped and expressed our frustrations with our studies.

“I can’t believe how difficult I am finding it to write the lyrics for these songs about ancient Egypt!” I exclaimed. “The essential keywords are so difficult to rhyme.”

“Give me an example,” she said.

“How about ‘hieroglyph’, ‘agriculture’, or ‘mummy’? They have very few words which rhyme with them, and even fewer of those are relevant to the topic,” I complained.

“That’s difficult,” she agreed, then asked, “What other problems are you finding?”

“The curriculum is so huge, and there is so much information that must be included that I am concerned that the lyric lines are too long, and the information is too dense. Are these songs too complex for middle school students? If I include all the facts, will the songs be too long for them to remember easily?”

“Maybe you can write several, shorter songs on the same topic,” she suggested, adding, “I find that if I am not making progress on a particular research activity, it helps to leave it for a while to gestate while I work on something else.”

“That works for me too,” I replied, pouring more tea, and continued. “Another issue I am wrestling with is whether my music will appeal to today’s students. So far my
classes have liked nearly all of the songs I have taught them, but what about the ‘too cool for school’ kids who have sophisticated and very particular musical tastes? I know that if I were teaching them, my personality would be part of the learning experience, and I could probably enthuse most of them, or at least give them the dreaded ‘teacher look’ to intimidate them into trying to sing. But what happens when these songs are taught by a classroom teacher, who may not necessarily be confident with singing, or even enthusiastic about song in their classroom?"

“That is a problem,” she agreed. “Maybe when you are offering the songs to schools you can include a guide for teachers as to how to use the songs? With the graphics and CD the kids should be engaged, even if they are not singing.”

“Yes, I have had quite a few kids who sing inside their heads, rather than with the class, especially the boys whose voices are changing. Even without vocalizing, they still learn the materials,” I responded, and added wryly, “If all else fails, they can rap the songs.”

“How are you going to make the songs for the different civilisations distinct from each other?” she asked.

“Ah, that is where my two years of ethnomusicology studies bear fruit,” I replied. “I hope to use authentic musical styles or modes for at least one song for each civilisation. For instance, the Cairo Museum has recreated flutes based on those found in the Pharaoh’s tombs, which provide researchers with the authentic scales of the period (Garstang, 1907; Saleh, 2000; Southgate, 1890). I am using one of them for the song about the Nile. I have borrowed the accompaniment style from the Greek traditional song “Strose to Stroma” which evokes the mood of “Zorba the Greek” for the song about
ancient Athens. Apparently Roman music was based on Greek modes (Sachs, 1969), so there are no exclusive musical characteristics I could utilise for the Roman civilisation songs. The song about Chinese geography uses a traditional Chinese scale structure, which varies almost bar to bar. Maybe it is the eternal geek in me, but I love the idea that the students will be absorbing another culture’s musical vocabulary without realising it.”

“That’s the teacher’s dream, to hide knowledge in plain sight,” she laughed.

**Reflection**

As I completed each song I sent it off to my music supervisor for his comments and suggestions. This was the first time I had been evaluated on my composition skills since I was at university decades ago, so it was initially rather daunting. I found I was lacking my usual, hard-earned self-confidence for the first songs I sent. Fortunately, he was collegial and supportive, offering insightful and helpful comments, and my confidence in my abilities and skills increased. After receiving his feedback, I would make changes and improvements, and send them for his approval. In a few instances, I put forward a case for staying with my original musical choices, which he endorsed. It was intellectually very rewarding to have to justify my decisions, and this process allowed me to analyse and question my work more deeply.

As a result of this reflection, I began writing multiple versions of songs, such as the five different melodies for “Mummies”. In that particular case, I started with a very dense text/lyric, which was difficult to set to melody, so I rewrote the lyrics over a period of two months, and composed five different melodies for the eventual set of lyrics. I wrote seven different versions of Ancient China Geography over a period of eighteen months. Having to balance the required curricular materials and information with a
realistic length and level of musical complexity led me to assess my work much more rigorously, and be far more ruthless in pursuing improvements in the songs. I revised and rewrote seemingly endlessly in my efforts to improve not just the songs themselves, but also my work practice.

Looking backwards and forwards – linking memories, directions, results

I am the dolphin diving in delight through a sea of brightspun songs

Words scramble, scurry like squirrels, skip down the page refusing to rhyme

All my life I have written poems, wordpainting small slices of life

Creativity’s incubation – the “a-hah” while washing dishes
CHAPTER IV

METHODOLOGY

4.1 Introduction

Academic research is an evolving discipline (Arnold, 2012). Traditionally, university research methods follow a “scientific” model, performing a study in a structured manner in order to prove a hypothesis, test a theory, or answer a specific question (Creswell, 2013b). This quantitative research paradigm conforms to the positivist epistemology viewpoint that knowledge or reality can be “discovered, measured and controlled [by] objective means” (Leavy, 2009, p. 5).

However, some researchers argue that this is a limited perspective on how to understand and explain the world (Chinn, 2014; Hamilton, 2010; Yanow, 2015). Eisner (1997), for example, argued that conventional forms of research often constrain the data in ways that misrepresent the phenomena the researcher wishes to understand, and urged the development of new, more flexible forms of data representation. Others, while promoting systematic research note that qualitative research can be “self-critical inquiry” (Stenhouse, 1981, p. 103) “whose goal is communicable knowledge” (Archer, 1995, p. 6).

Creative research practice is a relatively new area of academic inquiry, emerging as a discipline in the 1980s when universities amalgamated with fine arts institutions in Australia, Europe, and the United Kingdom (Arnold, 2012; Bennett, 2009; MacDowall, 2012). The problem then arose as to how to integrate the traditional structured research environment and protocols with creative and artistic practice (Gray, 2004), with
considerable discussion about the structure of creative research programmes as they develop (Arnold, 2005; Grierson, 2009; Kaila, 2008; Webb, 2013; Yeates, 2009). Artists were encouraged to justify their practice and define it as research as best they could, grafting a supporting written research component onto the production of different art forms (Krauth, 2011; MacDowall, 2012), and leading in some cases to exploration and evaluation of the process of creativity rather than the product (Jewesbury, 2009).

These creative research methodologies differ from academia’s traditional focus on scholarship and publication. However, both scientific and creative research paradigms must follow the same overall structure: identifying the problem, then collecting, analysing, presenting and discussing the data in a methodical fashion (Thun-Hohenstein, 2009). There is consensus that the scientific and creative arts paradigms are similar in that investigative, iterative, creative, and visualisation processes are evident in both practice and research (Gray, 1993; McNiff, 2007; Yee, 2007). As long as the researcher can prove that their research is thoroughly argued and referenced, then methodological innovation can be part of their contribution to the field (Yee, 2010).

However, within the flexible qualitative research paradigm there are generally agreed upon criteria: it should involve a clearly stated research question with objectives as to how the question will be answered, the research context, a rationale as to why the question should be investigated, a survey of previous studies in the area, and a statement as to how the project will contribute to the field (Gray, 2004; Orna, 1995). Ideally the method will be easily described, systematic, and replicable (Boyd, 2009; McNiff, 2007).

I selected qualitative research rather than quantitative or mixed-methods research methodology because it is the most appropriate approach to investigate my research
A qualitative perspective seeks to systematically observe practices (Brown, 2009) and to “explore, explain, or describe a phenomenon” (Marshall, 2014, p. 77), in order to understand and explain the world (Hamilton, 2010). Qualitative studies are “systematic research conducted with demanding, though not necessarily standardised, procedures” (Taylor, 2015, p. 10), that are well suited to the creative arts. Further, using a “systematic, self-critical [form of] inquiry” (Stenhouse, 1981, p. 103), qualitative researchers initiate a self-reflective “feedback loop between speculation and experimentation” (Brown, 2009, p. 103), allowing the generation of new knowledge.

Qualitative research utilises a naturalistic, interpretive approach, where researchers study phenomena in their natural settings (Denzin, 2011). It involves self-assessment and reflection of the researcher (Choy, 2014, p. 99), and is best suited to research exploring a previously little-investigated concept or phenomenon (Creswell, 2013b). Qualitative methodology is “inductive, emerging, and shaped by the researcher’s experience in collecting and analysing the data” (Creswell, 2013a, p. 22), and, as I have discovered, the research questions may evolve and be revised as the study proceeds in order to better understand and explore the problem (Creswell, 2013a; Marshall, 2014). Other characteristics of a qualitative approach are:

(a) the data are collected as words rather than numbers,

(b) the outcome is a process rather than a product,

(c) the focus is how the participants make sense of their lives and experiences,

(d) the language is expressive. (Stinson, 2009, p. 32)
Within the general category of qualitative research there are many approaches. For this thesis I chose to use autoethnography as the most appropriate methodology to tell the story of my own experience of transformation over time.

4.2 Autoethnography

Autoethnography is a qualitative research approach that describes and analyses personal experience in an endeavour to better understand a culture (Raab, 2013) where the researcher is the subject and their experiences are the data (Ellis, 2010). This allows the author/researcher to write a highly personalized account extending understanding about a societal phenomenon (Sparkes, 2000; Wall, 2006), and “making sense of lived experience and communicating it to others” (Bochner, 2016b, p. 210). Because of the very personal nature of autoethnographic analysis, the writing is primarily in the first person, to best express the researcher’s own experiences, thoughts, responses and actions.

Autoethnography differs from other qualitative research approaches in several aspects. There are multiple methodologies and modes of presenting data (Parry, 2009; Smith-Sullivan, 2008). Typically written in the first person, it is appealing to a wide audience as it is less emotionally distant than typical scholarly writing (Bochner, 2016a). Autoethnography is reflexive and actively engaged with the data, rather than generalizing from a broad bird’s-eye perspective (Woodward, 2015). By placing the writer within the research and including their personal experiences and reflections, this method adds something new to the reader’s understanding, becoming more than simply summary and commentary (Wall, 2006).

Autoethnography “acknowledges and accommodates subjectivity, emotionality, and the researcher's influence on research, rather than hiding from these matters or...
assuming they don't exist” (Ellis, 2010, p. 2). Acknowledging their own biases allows researchers to illuminate and explore their identity, history, and culture (Dethloff, 2005; Pichon, 2013). In this case I acknowledge the cultural and musical influences from my musical career and professional studies that have determined my compositional vocabulary.

Narrative allows me to invite the reader to share my personal journey and life experiences to illustrate an unusual activity and culture, that of educational composition. It permits me to present prior events and understandings and situate them in the arc of the journey, reinterpreting and rewriting the past to inform the present (Bakan, 2014).

These reflections allow me to distance myself from the lived experience, and can lead to a less emotionally involved perspective that provides greater clarity (Raab, 2013). This combination of personal involvement and detached analysis is a hallmark of autoethnography. By experiencing and examining events and actions, then observing and analysing, the data becomes relevant and meaningful, rather than just a story (Méndez, 2013). Readers may relate to my shared lived experiences and perceptions, leading to self-reflection and a richer understanding of how song can be used successfully to teach concepts and information. If they find similarities to their own situations, the research may have a transformative effect on their lives or teaching situations, and help them to function more effectively as teachers and learners (Chang, 2016).

Anderson (2006) proposes that there are two forms of autoethnography. Evocative ethnography uses the researcher’s introspection about their experiences and feelings to connect with the reader, and utilises “performative writing, arts-based processes and materials” as “transformative tool[s]” (Woodward, 2015, p. 13). In
contrast, analytic ethnography is more directed and uses objective writing to “develop theoretical understandings of broader social phenomena” (Anderson, 2006, p. 373). My research falls into the former category as it reflects on my creative journey and the development of my work process through cycles of self-examination, reflection, reflexivity, and constant revision. This cycle of iterative research, learning, adjusting and reviewing is also described as Converging Strange Loop Research methodology (Anderson, 2006), or action reflection method (Boyd, 2009).

The connective model of autoethnography, developed by Hamilton and Jaaniste (Whitehead, 2008), presents the situating concepts, the precedents of practice, and the researchers’ own creative practice and artefacts. This supporting research synthesis provides a tool to organise, summarize, and systematically compare data and materials, and connects the practice and creative work to research into the subject, providing both a “contextual framework for the practice, and…commentary on the creative practice” (Hamilton, 2010, p. 31). Combining an academically objective review of the existing field and established practices with personal reflection and commentary on the creative process integrates both the context and commentary research models (Hamilton, 2010).

4.3 Research design

Qualitative research, in particular, must be supported with data to be credible, dependable, and trustworthy (Holt, 2003). As autoethnography the data must record and reflect deeply personal processes in my songwriting. In this instance the data that has been analysed to answer the research question are the journals and workbooks that document my songwriting/crafting process over time.
I have habitually hand written workbooks and journals as I work on songs. I have found that handwriting information helps me to better process and retain it. I also find it convenient to amalgamate all the materials in one location, rather than a plethora of websites, printed pages, and texts. A typical series of entries includes curriculum outlines, vocabulary lists, essential questions and concepts, and transcriptions of information from multiple sources. These documents and my previous and current original songs are the essential data of this research. Table 3 outlines the different styles/purposes of each workbook or journal.

<table>
<thead>
<tr>
<th>Type</th>
<th>Purpose</th>
<th>Distinguishing code used in this thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Journals 1 &amp; 2</strong></td>
<td>To record progress, emotional responses, insights, epiphanies</td>
<td>J1, J2</td>
</tr>
<tr>
<td><strong>Workbook 1</strong></td>
<td>To collect curricula, essential facts &amp; vocabulary, information, create rhyme wordbanks, and document the creation of songs about Ancient Egypt</td>
<td>WB1</td>
</tr>
<tr>
<td><strong>Workbook 2</strong></td>
<td>To collect curricula, essential facts &amp; vocabulary, information, create rhyme wordbanks, and document the creation of songs about Ancient Greece</td>
<td>WB2</td>
</tr>
<tr>
<td><strong>Workbook 3</strong></td>
<td>To collect curricula, essential facts &amp; vocabulary, information, create rhyme wordbanks, and document the creation of songs about Ancient Rome</td>
<td>WB3</td>
</tr>
<tr>
<td><strong>Workbook 4</strong></td>
<td>To collect curricula, essential facts &amp; vocabulary, information, create rhyme wordbanks, and document the creation of songs about Ancient China</td>
<td>WB4</td>
</tr>
</tbody>
</table>
Data Sources

In general, the data sources for this study are curriculum documents and associated subject information, “field texts” (Clandinin, 2000), conversations with other teachers, and academic feedback, particularly from my composition supervisor. The first sources are the curriculum guidelines provided by education authorities in four countries. I utilised the national curricula of Australia, Canada, the United Kingdom and the United States, all of which are published online.

The second data source is the teaching colleagues I have worked with. None of them are named in this thesis; however, they provided professional and emotional support when both the songwriting and the academic rigour were problematic or difficult.

Completing this project demanded that I interrogate a process that I had been using for nearly twenty-five years and report that interrogation in academic terms. My academic supervisors were sometimes a source of support and guidance and at other times a source of frustration as the focus and design of my research evolved. Evidence of their input is scattered throughout the data. In particular, my composition supervisor had a positive impact on my thinking about songwriting as demonstrated in the data. As such he is a data source.

In presenting my narrative I interpolate three vignettes into a structure based on the model of creative process as described in Chapter II. These vignettes are presented as conversations with other teachers over a period of twenty-five years, at pivotal moments in my development as a composer. As narratives each of these vignettes is indicative of the importance of each of these data sources.
4.4 Data Collection & Analysis

The data collection phase took place over eighteen months in 2014 – 2015 and followed but did not conform exactly to the models of creativity proposed by Wallas (1926/2014) and Sadowski and Connelly (1999). The research data is documented as field texts as I compiled multiple workbooks and journals, as well as assessments from my composition supervisor. For a full description of the creative process please see Chapter 5.

The process of data collection begins with gathering data from the general curriculum outline, then identifying specific song subjects. I assembled relevant curricular information and materials from a range of mostly online sources including school districts, departments of education, and children’s educational websites, and textbooks over a period of eighteen months.

The selection of data to be included is determined by the number of required facts and the amount of available material. These factors also dictate the length of each song, which in this project ranges from eight to thirty-two lines. To keep songs concise and short enough to remember, I rank the data in order of importance, and omit the least crucial information.

The data is recorded in handwritten books. Key words are identified and wordbanks created, leading to rhymes and couplets, then notated rhythms, melodies, and harmony.

The workbooks evidence the models of creativity described in Chapter 2 (Sadowski, 1999; Wallas, 1926/2014). The preparation phase is the selection of the subject matter and collection of the curricula and study materials. Incubation and illumination occur over a period of time ranging from days to months as each song is
developed through a recursive cycle of craft, evaluation and revision. The verification stage is the production, arrangement, and refinement of each song’s final version.

In addition, the workbooks demonstrate elements of the three models of composition (see Figure 2) as the roles of lyricist and composer merge. The phases explored in these models are evidenced not only in the journals but also in conversations with supportive colleagues and supervisors, and in the structure of the composing environment.

The following chapter is a narrative description of my songwriting process. A chapter that analyses my songwriting process over a 30-month period follows it. This analysis, based on the models of creativity and the elements of songs for children, will result in a model for writing curriculum-based songs, and will also explain how the process of writing these songs differs from the process of writing popular songs.
CHAPTER V

Songcrafting: My personal process

This chapter outlines the method and techniques I use to create curriculum-based songs for young students. My creative process model varies slightly from the common model of preparation, incubation, illumination and verification (Sadowski, 1999; Wallas, 1926/2014) (see Figure 1). The four phases are the identification and definition of the problem or task, the investigation and collection of data, a recursive process of incubation and conscious work alternating with illumination and flow, and finally, production, evaluation and refining of the artefact. The first phase expands on the first preparation phases of Wallas (1926) and Sadowski and Connolly (1999) by identifying and defining the problem as a separate phase of its own. I believe this is because the educational subjects and materials of the curriculum-based songs I write are not familiar to me. As a result, considerable time needs to be set aside to understand the topic, teaching methodology, and the specific level of required knowledge at different grade levels in school.

This creative process model also incorporates elements of composition methodologies as shown in Figure 2. These additional stages are sketching, musical analysis, aesthetic reflection, experimentation, and publication.

After gaining an understanding of the subject area and the skill levels of the target audience, the second stage is one of research and information collection. This stage that is vital in writing curriculum-based songs has been extracted from the first stages of two other models of the creative process as shown in Figure 1.
5.1 Identification and definition of the task

For this research I selected the curriculum subject of ancient civilisations. The motivation for choosing this subject is that every national curriculum includes the study of ancient civilisations, usually at the middle school level. I chose to write the songs for the middle school grades for several reasons. First, I can use the songs with my own classes. Second, the high school history curriculum contains more much complex material than could be covered in relatively short songs. Last, most high school students do not sing in school.

I commenced by researching national middle school history curricula of Australia, Canada, the United Kingdom and the United States, all of which are readily available online. These countries were selected because I hope to use these songs for teaching in the future, both in my home country of Australia and in the United States where I currently live and teach. They are all English language-based, and have similarities in content, scope, and sequence. I included Canada and the United Kingdom to provide a wider data bank and other perspectives, though they did not include as much detail as the United States guidelines, which formed the core of the curricular data.

I transcribed the sections that were relevant to the four areas I had selected for the songs, the civilisations of ancient Egypt, Greece, Rome and China. By comparing them I was able to ascertain the commonalities and compile lists of essential facts and vocabulary. For example, if a particular term or concept was included in the majority of curriculum outlines, I would add it to the list of essential facts, while a term which appeared only once would not be added. I reviewed the curricula then made separate lists of the core materials for each particular topic, highlighting the similarities.
Once these essential facts were identified, I researched the relevant reference materials that provide the supporting background information. Many of the curriculum guides include classroom materials and references online. I also used middle school textbooks and educational websites targeted to that age group, to ensure the use of appropriate vocabulary and content. This information was collated into pages of handwritten notes. These were then distilled into libraries of wordbanks and rhyme lists to be crafted into lyrics.

5.2 Investigation and collection of data

Having identified the subject/topic and the musical skills and capabilities of the target audience, the next phase is to investigate sources and collect the data that will contribute to the songs. The first step of this phase is to collect curriculum and vocabulary lists as well as key subject information. The quality and quantity of information available differs between education authorities. Using curricula from a range of countries enables collection of a more comprehensive data set.

In a subjective process I rank the information in order of importance and relevance, from most essential to least. This sorting and classifying stage helps define the subject and materials to be included in the songs. It is important to keep in mind the age, grade level, and syllabus requirements of the intended students. These factors will determine the length of the song, and the amount of detail to be included. For example, a second grade song will contain 8 to 12 lines of simple lyrics, with a repetitive short chorus containing the most important facts, while an eighth grade song may be 16 to 30 lines, with more data, sophisticated lyrics, and complex melodic shapes, intervals and rhythms. A song about washing hands has far fewer essential facts than a song defining the parts of
the human brain.

The next stage in preparation is to create word banks, lists of important words with their rhymes, to provide potential couplet endings. An excellent rhyming dictionary is essential in this process. As Sondheim writes, “Finding appropriate rhymes that haven't been used before is one of the few pleasures of lyric writing, an occupation consisting chiefly of tedious list-making and frustration” (2010, p. 5). Word banks are important because they can trigger new associations with other aspects of the subject.

Rhyming is challenging, especially as I attempt to develop internal rhymes within lines, as well as the traditional final rhyme pattern. Poet Laureate Billy Collins inspired me when he said, “In the best poetry, the rhymes, you might say, abandoned their little positions at the ends of the lines and invaded the body of the poem. They went inside the poem and became a more organic part of its soundscape” (2016).

As well as lists of rhymed terms, it is helpful to write out the basic facts that the students are required to learn in short phrases. Keeping to common speech patterns makes it easier for students to absorb and retain the information. Looking at the “fact phrases” will also provide a list of other potential rhyming words that may be placed at the end of a sentence or lyric line. This will also establish the order of facts in the song lyrics.

Rhyme pairs or chains are then combined into phrases and lyrics. Important word stresses must be placed on strong beats so that the word rhythm flows in natural speech patterns. This can lead to awkward rhythms where syllables may be “rushed” so that the next strong word accent is placed on an appropriate strong beat of the musical bar or
phrase. It can also prompt more interesting rhythms to incorporate syllables, such as syncopation or triplets, making the delivery more engaging.

Rhyming dictionaries can be useful for songwriters, but as Oscar Hammerstein wrote, they:

“should be used as a supplement to one’s own ingenuity, and not a substitute for it…Attractive combinations of words to make double or triple rhymes are not found in rhyming dictionaries, nor are modern words or colloquialisms which can be used with humorous effect in a song.” (1985, p. 20)

However, even Stephen Sondheim uses a rhyming dictionary, and as successful songwriter Pamela Oland writes, “It's not knowing what the rhymes are that makes a good songwriter; it's knowing what to do with them!” (2001, p. 9, author’s emphasis).

Once I have developed rhyming word pairs, I begin to write rhyming couplets or verses. The age level of the target market determines the appropriate vocabulary. For instance, multisyllabic words should be used sparingly for very young singers. Essential terms should be accompanied by an explanation rather than presented as a list, as in “Democracy” (WB2).

Hereditary rule by kings or queens is monarchy,
Government by the few is oligarchy.
An elite upper class is an aristocracy,
While a popular, strong leader was called tyranny.

Another example is the “Legionaries’ Song” (WB3) which combines essential vocabulary words (legion, century, roads, trade, Pax Romana) with rhyme, including a composite rhyme.

We’re Rome’s legendary army, six thousand in each legion,
Eighty in a “century” keep peace in every region.
Our roads bring trade, communication, safe travel and calm, a
Stable two centuries – the “Pax Romana”.

An example of more complex rhyme patterns is found in “Hieroglyphs” (WB1).

Writing in pictographs, symbols, and signs, Hieroglyphs – each one a different meaning defines. Records of trade, the money that was paid. Crops and weather, medical texts, designs for building grand projects. Taxes, army records, laws, supply lists of needed stores. All written in symbol and sign, for each word, pictographs combine.

5.3 Recursion: Incubation and illumination

The incubation phase alternates with the preparatory activities for information gathering and selection, part of the recursive cycle of the composition process.

Interestingly, recursion is not included as an essential phase of the creative process model (see Table 1), whereas it is crucial in the composition model (see Table 2). As I work on each song I schedule time away from the word banks and essential information, often working on a different song or collating further information. This process of recursion allows my unconscious mind to make connections and problem-solve, leading to the illumination phase, or “a-ha” moments where a lyric will appear in my conscious mind as if from another source, as in Csikszentmihalyi’s “flow” experience (Nakamura, 2009).

These phases alternate between craft and inspiration. In the process I document the multiple versions and variations of songs as I develop lyrics, rhythm, melodies and harmony, and describe the reasons for alterations and modifications. I ask repeatedly, which rhyme pattern will work best? What melodic shape best suits the word rhythms and stresses? Which key is best for the melodic range of the song? Will inserting a rest add emphasis to the following word? Should each syllable be sung to a different pitch, or will repeated notes make the song easier to sing? This recursion process cycles between
conscious and unconscious work, with preparation leading to illumination or the “a-ha” moment of so-called inspiration.

The final, fourth phase is the production and evaluation stage, which presents the songs as the product of my creative process, and the research data in the form of the supporting materials that form the scaffold for my creativity. I discuss my professional growth and examine the emotions and personal transformation I experienced through the research journey.

Depending on the amount of information to be included, and the style and rhythm of the words, I will decide on metre, verse structure (four, six or eight lines to a verse), and whether or not to include a chorus. I place the most important information in the chorus, as it will be repeated several times, thus leading to greater retention. This is exemplified in the choruses of “Democracy” which defines the concept, and “Chinese Dynasties”, which lists the major dynasties in chronological order.

**Examples of important fact choruses**

**Democracy**

Yes, a masterpiece from ancient Greece – democracy.
“Rule by the people”, all men equal – democracy.
In Athens in 510 B.C. – civic responsibility,
Important matters voted on, that is – democracy (WB2)

**Dynasties**

Shang, Zhou, Qin, and Han, / Sui, Tang, Song, Yuan,
Ming, Qing, history’s / Great Chinese Dynasties. (WB4)

As the lyrics are developed, I add rhythmic notation based on speech patterns and rhythms. Usually melodic shapes and patterns evolve as the metre and rhythm are established. For younger students I use simple metre and rhythms, while older singers are capable of singing syncopated or complex rhythms.
I create new, original melodies for the songs. In choosing the vocal range, most of my teaching songs are written in the adolescent voice range of A below middle C (more commonly middle C) to D a ninth above middle C. This extends the 6-note range (D–B) advocated by the Hungarian composer and music educator Kodály and others as the best for the younger child’s voice (Johnson, 2012; Waterhouse, 2002).

The melodies I create are “kid-friendly”, in that their shapes are primarily in step-wise or triadic movement. I avoid large or awkward intervals, using them only sparingly for effect. However, I have found that once students have singing experience, irrespective of age, they are impatient with simpler melodies and music. They enjoy the challenge of more complex melodic shapes, lyrics, and syncopated rhythms, and gain a sense of accomplishment and self-confidence through singing more “difficult”, demanding music.

The tempo / speed of each song is determined by the number of syllables in each line, the complexity of pronunciation and enunciation, and the subject matter or mood. For example, lyrics with extra syllables in a line require a slower beat, as in the sixteenth notes in “The River Nile” (“annual floods” and “fodder for beef”) (WB1), and “Hieroglyphics” (“In eighteen twenty-two Champollion deciphered”) (WB1) that decrease the overall tempo.

The form of the songs is usually strophic, AAAA or ABAB, with repeated verse and chorus melodies. “Hieroglyphs” varies this slightly by repeating the four-line introduction as a final chorus, so the form is ABBA. Like Gfeller (1986) and Wallace (1994) I have found that repeated verse melodies appear to aid retention, rather than through composed, which introduces new melodies throughout. Repetition of melodic phrases and shapes also enhances learning and memory (English, 2014; Trinick, 2016).
My final stage of song-creation is adding harmony, usually at the keyboard. I tend to conform to standard harmonic progressions with which the students will be familiar, adding occasional “outlier” chords or harmonies to add interest or emphasis.

I rarely write in parts for children’s songs when I do not know the experience, ability, or confidence levels of the singers. In my experience, it is more effective to keep the music as simple as possible so that the singers can be successful immediately, leading to increased enjoyment and confidence. This is particularly important when the students will be learning using multimedia or a CD, or where the teacher is not musically trained or lacks confidence in their singing abilities. When I am writing for older or more experienced singers, multiple part writing becomes more frequent.

In my development as a composer, I began by producing handwritten scores for my students, but now use the industry standard music publishing software package, Sibelius. This has saved hundreds of hours of notating multiple versions of a composition, and allows me to hear and save playbacks of each version and to make instant edits and changes. Working on a computer also allows the composer to work away from a keyboard or piano.

I use a variety of musical genres and styles for variety. My early musical influences included jazz, Renaissance music, Kurt Weill, Stravinsky and Bartok, folk songs, rock music, Broadway musicals, and the full standard “classical” repertoire. I also studied ethnomusicology for two years, broadening my musical vocabulary and horizons, and becoming aware of authenticity in ethnic music.
5.4 Production, evaluation and refinement

The verification phase includes evaluation and elaboration (Sadowski, 1999) and “focused evaluation and modification” (Liu, 2016, p. 3352). This parallels the “work/craft” composition approach, where the trial and error process works in tiny steps towards the final product through rewriting each song, often multiple times (Runco, 2014), using recursion. Critical comments from my composition supervisor were helpful in suggesting new approaches or techniques, which I then incorporated into later compositions. The final stage of the process is the arrangement of the piano accompaniment and presentation of the product, or final version of each song.
CHAPTER VI

Analysis

6.1 Reflections on Composition

After reviewing the literature and developing a better understanding of songwriting, I needed to answer my original research question and show how my creative process has been altered by the research. I asked myself a series of questions. How has my composition process changed, and why? What has influenced my writing? How can I prove that these changes are positive? What did not change? Why do I compose? What are the rewards of composing? What are the difficulties and challenges? What are my emotions when I write? I realised that in order to answer these questions, I should look back at my prior work, as shown in this journal entry.

Journal Entry, September 25, 2014

I started by asking why I write songs? I have always loved words and music, so it is not surprising that I would gravitate towards song composition. It offers many rewards. The sound of words and rhymes, and the images they can conjure are magical
to me. I gain intellectual satisfaction from creating a song, especially when the lyrics are information-rich. Also, song is a communal experience, which can be shared multiple times with many people. This is very different to the ephemeral euphoria of a musical performance that disappears as soon as the applause ends. Songs are records of my creativity, a legacy that I have seen affect my students’ lives positively over time.

The *how* of songcrafting has been described in detail in the previous chapter. This chapter presents an analysis of how my practice has changed and developed over time. I illustrate this evolution by comparing songs written earlier in my career with the current songs, and describe the emotional responses I experienced during my research journey. These changes in my creative practice are summarised in Table 4.

### 6.2 Previous songs comparisons

When I started writing educational songs it was an amateur, instinctive process, with very little structure. My practice was to write songs for the school or students I was teaching at the time, rather than for a potentially wider audience. I was comfortable with the relatively small stage for my work, which felt safe, and, after the first couple of songs being accepted by my colleagues and classes, relatively risk-free.

**Handwritten early song excerpt**

![Handwritten early song excerpt](image)

Figure 2 "Print" excerpt
The first songs were handwritten, sometimes with appropriate artwork on the borders. They contained only the melody and lyrics, with chord symbols for accompaniment. There were two reasons for this. As I had written the songs I knew the piano parts well, and did not need a full score. Also, we were trying to reduce paper use, and page turns, which would have been constant with full scores for the students.

Table 4 Comparison of prior and current practice

<table>
<thead>
<tr>
<th>Prior Practice</th>
<th>Reason for Change</th>
<th>Current Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>limited research</td>
<td>increased research in order to conform to national curricula</td>
<td>extensive research</td>
</tr>
<tr>
<td>no standard curriculum</td>
<td>use of national or standard curricula</td>
<td>use of national or standard curricula</td>
</tr>
<tr>
<td>limited vocabulary</td>
<td>use of rhyming dictionary, extensive wordbanks</td>
<td>use of rhyming dictionary, extensive wordbanks</td>
</tr>
<tr>
<td>basic information content</td>
<td>increased information content to conform to national curricula</td>
<td>increased information content</td>
</tr>
<tr>
<td>simple “child-appropriate”</td>
<td>increased complexity as I understood that children are sophisticated music</td>
<td>complex melodies, rhythms, melodic range and contour, rhythms, syncopation &amp; use of authentic ethnic music elements (scales, modes, melodic contours, intervals, traditional folk style accompaniments)</td>
</tr>
<tr>
<td>melodies, intervals, melodic</td>
<td>range and contour, rhythms</td>
<td></td>
</tr>
<tr>
<td>simple rhymes</td>
<td>increased complexity, resulting from the literature search into rhyme and lyric- writing</td>
<td>complex rhymes, including assonance, alliteration, and composite rhyme</td>
</tr>
<tr>
<td>simple harmonies</td>
<td>sophistication, due in part to my supervisor’s comments</td>
<td>more interesting harmonies</td>
</tr>
<tr>
<td>simple word rhythms</td>
<td>increased word rhythm complexity, due in part to my supervisor’s comments</td>
<td>increased word rhythm complexity, use of rests for text emphasis</td>
</tr>
<tr>
<td>published as melody only</td>
<td>added printed accompaniment</td>
<td>separate piano accompaniment</td>
</tr>
</tbody>
</table>

Another example of these early songs “Flight” is from a collection of songs about inventions and discoveries written for a Waldorf School (1993). It illustrates the
limitations of my early songcrafting, with limited research and basic curricular content, a simple melody and harmonies, even almost monotonous rhythm, and basic rhymes.

1. For thousands of years Man has dreamed of flying,
From Greek Icarus with his waxed, feathered wings.
Da Vinci drew models, like birds’ wings of wood,
Men hung from gliders, but nobody could

*Chorus* Fly, soar in the sun,
Escape from gravity.
Race with the clouds, touch the light of the moon,
Dance like sky-dolphins, fly free.

2. Hot air balloons with the brothers Montgolfier
Began Man’s travelling through the skies.
Inventors aplenty sent gliders off hills,
But none could control them, all ended in spills, trying to

3. The bicycle builders of Ohio,
The brothers Orville and Wilbur Wright.
In 1903 their “Flyer” flew,
In two years they’d perfected manned, powered flight, trying to

4. The first planes were fragile, wood, fabric, and wires,
New weapons of war, new heroes as fliers.
Research keeps on, millions travel the skies,
With rockets and jets Man has broken earth’s ties, we can

Though I included several important facts and names (Da Vinci, gliders, balloons, Montgolfier brothers, Orville and Wilbur Wright, 1903 “Flyer”, etc.), I now would incorporate more information facts, specifically in the chorus to take advantage of the mnemonic power of repetition. The melody was mostly stepwise, with the largest melodic interval only a perfect fourth, creating a simple melodic contour.

At that time I did not own a rhyming dictionary, so I spent considerable time speaking potential rhymes aloud, by taking the end rhyme and adding it to each letter of the alphabet in turn (e.g. “flight” – bite, bright, cite, dite, fight, fright, gite, height, jite, kite, light, might, night, pite, quite, right, sight, slight, tight, trite, vite, white, xite, zeit).
This produced a very limited rhyme list with predominantly monosyllabic words, rather than the multiple polysyllabic rhymes available in rhyming dictionaries. The poetic language of “sky-dolphins” and “fly[ing] free” now seems self-indulgent, but at the time was well suited for the class I created the songs for. It was one of their favourite songs.

An earlier song from the first song collection or “opera” was about explorers in the Renaissance, titled “One World” (1992). While it included the major explorers of the period, the lyrics were relatively simple, with a mostly stepwise repetitive melody and harmony. The introduction and fourth verse were intended to provide context for the song, but add unnecessary length to the song. The teacher requested I leave out the negative effects of invasion and colonisation, such as war, slavery and disease, so I omitted crucial curricular information. This was to suit the philosophy of the school, which for younger students focused on the benefits of exploration and discovery.

The word rhythms were awkward and hurried to fit them all into one line to conform to the rhyme pattern (e.g. “And sailed the Pacific all the way home, this was the longest quest” in just seven beats). The rhyme pattern was ABCB, rhyming only every second line, as my rhyming skills were still nascent. I also omitted any dates, which I now realise are crucial in creating useful educational songs.

1. Before our time the world was smaller, We all lived in lands unknown.  
   With journeys long and travels afar, Our Renaissance world has grown.  
   Marco Polo led the way,  
   From Venice through the Gobi Desert to the Silk Road he’d been.  
   He lived with Kublai Khan in Peking,  
   But nobody believed him when he wrote of what he’d seen.  
2. Travellers extraordinary, Journey to the ends of the earth.  
   At first for trade, for land, gold and glory, Finding all the treasures of great worth.  
   Vasco da Gama sailed down the African coast,  
   Round the Cape of Good Hope to the Indian Ocean.  
   He it was who discovered the Indies,  
   Where they traded precious stones and spices, what a brilliant notion.
3. Henry the Navigator, Prince of Portugal brought together a band of mapmakers, ship designers, pilots and astronomers to travel and chart new lands. Christopher Columbus discovered the New World, The Americas, the land of hope and treasures to the West. At its furthest south he found the Straits of Magellan, And sailed the Pacific all the way home, this was the longest quest.  
4. They circled the world and brought it together, crossing the lands and sea, discovering and learning, and now we can see what our world was really meant to be. These explorers shifted our boundaries further by searching the corners of the earth. Spinning through space, this tiny ball, they found one world, a home for all. Our one world, home for all (x2).

"One World" excerpt

![Music staff notation for the song "One World" excerpt.]

Another example of how my songwriting changed over time is the comparison of two versions of "Julius Caesar", written in 2002 and 2015. The only features I retained
from the first version, written for a home school co-op, was the chorus, both melody and
lyrics, and the key of G major. The first version is as follows.

**Chorus** Veni, Vidi, Vici: “I came, I saw, I conquered.”
Julius Caesar, Roman conqueror, he’s a Giant in history.

1. **Chorus**

   Born in Rome in one hundred B.C.
   Julius Caesar went into the milit’ry.
   Next a lawyer, then an elected politician,
   Each career gaining him recognition.

2. **Chorus**

   Governor of Spain, later of Gaul,
   He invaded Britain, conquered new lands, wanting them all.
   Pompey turned against him, so Caesar and his corps
   Crossed the Rubicon, began the Roman Civil War.

3. **Chorus**

   Italy and Spain he conquered. He was elected
   Dictator and Consul, as Rome’s leader was selected.
   Egypt was next to fall, where Cleopatra he aided.
   He defeated Pompey’s troops when Morroco he invaded.

4. **Chorus**

   Back in Rome, he ruled well, and pardoned his enemies,
   Though many hated what they thought were his tyrannies.
   He became so powerful, ruled Egypt to Gaul,
   They feared that Rome’s traditions and the Republic would fall.

5. **Chorus**

   Sixty senators conspired, they stabbed him to death
   On the Ides of March, in forty-four. With his last breath,
   Caesar said, “Et tu, Brutus?” (“And you, my son?”).
   Betrayed, the brilliant general’s great life was done.

The melody was based on a repeated ascending perfect fourth then stepwise movement,
balanced by a descending perfect fifth, fourth, then thirds both ascending and descending
from the tonic key note. The harmonic progression in the verse was standard for my
writing style of the time (G major, C major, G major, C major, e minor 7th, a minor 7th, C
major 7th, D major, e minor, C major, D major, G major). The rhyme pattern was AABB,
rhyming every line (rather than every second line as in “One World”).

The 2015 version (WB3) (see Appendices 1 & 2) was more concise, with three
verses rather than five, though I extended the third verse by two lines to introduce the
Roman Empire. I was more selective about the information for inclusion based on the curricula, omitting his early professional career, Cleopatra and Egypt, the “Et tu, Brutus” quote (which may be apocryphal), and the countries he invaded apart from Gaul and Britain, as these facts were not ranked as essential in the curriculum guidelines. The new melody is also mostly stepwise, using the same octave melodic range (D – D), but with the flattened 7th (F natural). The harmonic progression is more interesting (verse: G major, B flat major, C major, D major, a minor, D major, e minor, B major, C major, D major 6th), while the rhythm includes dotted rhythms and syncopations for interest.

Chorus “Veni, vidi, vici.” “I came, I saw I conquered”.
Julius Caesar, Roman conqueror, he’s a, Great man in history.

1. Julius Caesar was born in 100 B.C.,
A general and statesman extraordinary.
He conquered Gaul, invaded Britain, he never lost a war,
But he grew too powerful, so was assassinated in 44.  

Chorus

2. One of the First Triumvirate, the Rubicon he crossed.
This treason led to civil war, which Pompey lost.
Caesar reformed the calendar, the first news sheet created,
Wrote anti-extortion laws, grain for the poor regulated.  

Chorus

3. Elected dictator, he ruled Egypt to Gaul,
But the Senate feared his power, that the Republic would fall.
On the Ides of March in 44 BC
Sixty senators stabbed him to death, a conspiracy.
Little did they know their plot would backfire.
Octavian Augustus, Caesar’s great-nephew, then started the Empire.  

Chorus

In evaluating my early educational songcrafting, I recognise not only its evolution, but also some characteristic elements of my personal composing style and skills that have remained constant. These elements include my use of rhyme, rhythm and particularly syncopation, wordpainting, and harmony.
Perhaps as a result of my early poetry writing, and love for reading poetry, some of my early song lyrics incorporated interesting rhymes. Examples include composite rhyme in “Steam” (“Watt improved Newcomen’s engine with a separate condenser / And automatic regulator, so as a consequence, A / steam engine used less fuel, maintained a constant speed, / They soon were used wherever there was a need”, 1993); internal rhymes in “Circe the Enchantress” (“Circe begged for mercy, he made her swear / To reverse the curse she’d laid on his sailors there. / Back to men they changed again, better than before, / A year they stayed before they made their farewells once more”, 1995); and AAAA rhyming in “Hitler’s Final Solution” (“So, let’s start with persecution / Some wealth redistribution / Build camps for execution / Let’s find the Final Solution”, 1998).

I sometimes change time signature or metre for rhythmic interest, as in the Finale to “Renaissance” (1993) which switches from 4 4 to 6 4 and back, and includes triplet half notes for the word “renaissance”. “City” (2011) alternates 6 8 and 4 4 in the chorus to express the hustle and energy of London in the eighteenth century, as well as using internal rhymes (“crowd/loud”, “smoke/choke”).

“City” excerpt

![City excerpt]

This place is so crowd-ed, so dirty and loud, it feels like Hell. The sky’s full of smoke, makes you cough, makes you choke, and then there’s the smell.

© Aniko Debreceny 2011

Figure 3 “City” excerpt

“Einstein” chorus

Figure 4 “Einstein” chorus

Wordpainting is a musical depiction of the lyrics’ meaning. A well-known example of this is the tenor aria “Every Valley Shall Be Exalted” from Handel’s “Messiah”, where the melodic contour rises on the word “exalted” and descends on the word “valley”, while the word “plain” is a long held note. My songs also use melody and harmony as musical emphasis of the lyrical content. “The Decline of the Roman Empire” (2015) is in a minor key, as are most of the songs about slavery (“Dreams and Heroes”, 1996).

In “Newton” (1995) I used a falling octave interval to illustrate the phrase about discovering gravity, “An apple fell down and hit him on the head.”
Throughout the composition process I critically assessed each song and its lyrics prior to submitting them for comments from my composition supervisor. This evoked memories of my undergraduate studies where I feared that the analysis and self-critique skills I was developing would “kill the muse” (Weston, 2015, p. 71), and prevent intuitive and expressive performance or composition. However, it seems that over time I had developed the skill of creative critical listening, which in some cases led to increased innovation and productivity, a result experienced by many students studying popular songwriting at university (Weston, 2015).

My composition supervisor’s comments were insightful and constructive. For instance, in the song about the Nile, he suggested changing harmonies and rearranging the accompaniment to avoid dissonances (though some were actually intentional). He recommended moving unimportant words from the first beat of bars, and shortening their note values so as not to give them unnecessary importance, and lengthening note values for important words. One evaluation reminded me to “make the phrasing more breathable” (Barrow, personal email, 2015), which changed how I thought about phrasing and phrase lengths.

He suggested alternative harmonisations, encouraged me to think innovatively regarding rhythm, harmony, and melodic contour, and urged me to use more interesting
rhythms rather than a string of even eighth notes/quavers to increase the forward movement. As the successful composer of “Hamilton” Lin-Manuel Miranda said, “When you’re dealing with a constant rhythm, no matter how great your lyrics are, if you don't switch it up, people's heads are going to start bobbing. And they're going to stop listening to what you're saying, so consistently keep the ear fresh and keep the audience surprised” (2017).

I realised that I had been writing music that would conform to the standard “children’s song” parameters of simplicity, repetition, strong rhymes and symmetrical melodic contour as recommended by Gfeller (1983), Legg (2009), and Wallace (1994). However, as I found in the literature review, children of the twenty-first century are exposed to complex and sophisticated music from birth, and frequently perform complex music in their play (Campbell, 2010; Marsh, 2008). Also, unpredictability and variety are important and valuable elements of composition (Hellmer, 2005), as long as they are not used to excess. I started to take more chances, and gave myself permission to write more interesting melodies, intervals and rhythms, incorporating some of the poetic and dramatic elements of art song to children’s song (Kimball, 2013).

An example of this is the “Legionaries’ Song” chorus, which incorporates several ascending arpeggio figures and two descending octave intervals. The melodic range is a major ninth, wider than the recommended major sixth for children’s voices. The rhythm is syncopated, with ties across the middle of the bar, and the penultimate bar is unaccompanied to emphasize the lyrics and the octave melodic interval. This is a far more sophisticated and difficult melody contour than my earlier songs – and more fun to sing.
“Legionaries’ Song” excerpt

Figure 6 "Legionaries' Song" excerpt (WB4)

6.3 Emotional responses linked to the process

When composing a song I move through a series of emotional responses linked to the process and tasks at each stage. The first is curiosity as I select a subject to write about, and investigate the curriculum, content facts, and vocabulary. I am able to indulge my thirst for learning and knowledge by researching and writing songs about subjects as varied as astronomy, Einstein’s Theory of Relativity, Aesop’s fables, and the Holocaust.

As part of my composing process, I withdraw into a quiet space where I can focus on elusive melodic fragments and their combinations. This avoidance of other musical genres or styles helps me to write in my own distinctive “voice” and style, without plagiarizing. I isolate myself not only aurally, but also physically and emotionally, to be able to concentrate only on the task at hand in (almost) silence and calm. This allows me to write “inside the box”, not only within the inherent constraints of writing curriculum-based songs, but also in a figurative isolated space of focus and concentration. When I am deeply involved in songcrafting, I am very antisocial, ignoring everything and
everyone around me, which can involve abject apologies to family and friends when I emerge from the creative cocoon.

In the preparation/data collection phase I experience self-doubt as I query if I have enough information, and whether I have included all the essential facts (or just what I personally find fascinating). For example, when researching ancient Egypt, I compared ten curricula from the United States, Australia and the United Kingdom, listing their common terms, concepts and vocabulary. From these lists I selected the song subjects (geography, hieroglyphics, and mummies), but left out other important and interesting topics, such as the pharaohs, Hammurabi’s Code, the pyramids, cuneiform, and polytheism. As I am not collaborating with teachers in this research, I have to trust in my method of comparing all the curricula and choosing the most frequently included subjects and facts in order to select topics and information for the songs.

This lack of self-confidence is known as “impostor’s syndrome” or the “Impostor Phenomenon”, which was first defined as “an internal experience of intellectual phoniness” (Matthews, 1985, p. 71). Common among students, academics, and managers, those with the syndrome feel that they are fakes and that any success is due to hard work rather than ability. They are fearful that they will be exposed as frauds, and discount positive feedback or praise (Clance, 1985; Sakulku, 2001).

I still strive to overcome the impostor syndrome. Being raised to be an overachiever, I automatically distrust any accomplishment that is not difficult. I am uncomfortable with compliments about my songs, because I feel as though they are undeserved. Though intellectually I know that it is not true, in my mind, everyone could write songs. Also, especially with Csikszentmihalyi’s “flow” experience, I sometimes
feel as if I am merely the scribe to creativity from another source. I have often felt as though the two sides of my brain are talking to each other and working together without my involvement, so I should not take credit.

An example of this flow of inspiration is “The Decline of the Roman Empire” (2015), written more than halfway through the song production phase of my research. The lyrics for this song were written in less than a week, with a few minor revisions during the final arrangement.

*Intro.* You know, the decline of the Roman Empire took several centuries, With a multitude of reasons, including these:
1. Corruption and inflation, attacks and invasions, economic instability;
   Disease and plague, fewer slaves and a huge trade deficit led to devalued currency.
   Vandals, Visigoths, and Huns attacked the north and west,
   While by ever-higher taxes the people were oppressed.
   Dependence on slavery, internal power struggles, and civil wars,
   The high costs of public works and the armies, another cause.

2. The empire paid for the gladiators and fed the unemployed.
   A smaller population and German tribes’ migration meant the army deployed Barbarian troops, but that was a big “Oops!” because they became well-trained foes.
   They sacked Rome in two conflicts, then in 476, the last emperor was deposed.
   But the empire had split in two; while the west fell, the east grew, and as the Byzantine Empire thrived
   For another thousand years, ‘til the Ottomans appeared, what once was Rome’s Empire survived.

I greatly enjoyed writing this song, partly because there were so many relevant rhyme choices in the word bank I compiled. I was able to insert multiple inner rhymes (inflation/invasions, plague/trade, paid/gladiators, troops/oops, conflicts/six, two/grew, years/appeared). “Oops” may not be a textbook approved term, but I felt that the students would laugh, which might help them to enjoy singing the song.
I also gained a sense of intellectual satisfaction in incorporating all the essential facts with few extraneous words in only fourteen lines – the same length as a sonnet. I relish the challenge of writing a song with more in depth material or a larger number of facts that need explanation, requiring more complex writing. Such songs must build on previous lyrics sequentially if describing a period of history, a scientific formula, or a biography, adding another level of difficulty and potential accomplishment.

I reflected that I could choose to perceive the constraints of writing curriculum-based songs as a limitation to my creativity, or as a challenge to my skills to be innovative within a structure, restricting my lyrics to facts. Indeed, a preliminary title for this thesis was “Dancing in a Straitjacket: Creating Curriculum-based Songs for Learning”. While I also enjoy writing more personal, expressive songs, I gain a great sense of achievement from overcoming the restrictions of writing educational songs.

I also find intellectual satisfaction from incorporating appropriate musical scales, modes and rhythms based on ethnomusicological research, adding a historically and culturally authentic element to the students’ learning experience. An example of this is from the song about the Nile, which utilises the Dorian scale and a “gypsy” scale based on flutes from the Cairo Museum (Buser, n.d.).

**Egyptian modes**

![Figure 7 Egyptian modes](image.png)
The introduction of the Nile song incorporates a hybrid version of the Dorian mode and an authentic Egyptian flute scale.

**“The River Nile” introduction**

![Figure 8 "The River Nile" introduction (WB1)](image)

Another use of an ethnically appropriate scale is found in the song about Chinese geography, with an introduction based on the pentatonic scale. Traditional Chinese music scales are all based on pentatonic scales (Chao, 1957; Theobald, 2000), sometimes adding a sixth *piányin* (deviant) note (Shi, 2016). They frequently switch between different tone groups of three or four pitches in each bar or phrase.

**Pentatonic scale**

![Figure 9 Pentatonic scale](image)

The song about Chinese Geography uses this d minor pentatonic scale. In the introduction the C is used as the *piányin* note.

**“Chinese Geography” introduction**

![Figure 10 "Chinese Geography" introduction (WB4)](image)
Once a song enters the recursive incubation and illumination phases I pose the following questions. Are the lyrics and melody appropriate for the students’ ages and vocabulary? Are there too many facts with not enough explanation? Is the song too long for them to easily learn and remember? Is there a good balance between facts and “poetry”? While in my experience students will rise to the level of difficulty and challenge of whatever I write, am I expecting too much of them? These questions will be answered when the songs are used in a classroom. Fortunately, my composition supervisor has also taught music at different grade levels, and he felt that the songs were appropriate.

An example of how I worked through these questions is the song “Mummies”, which evolved over several months at the beginning of the research. This presented the usual challenges, especially in building wordbanks for essential vocabulary. Because there are no appropriate rhymes for “mummy” or “mummies”, I had to insert the term inside the lyric line, and rely on other words for end rhymes.

The first version has two six-line verses.

1. In ancient Egypt when a person died
   To preserve them for the afterlife, they were mummified.
   First the organs were removed, and in four
   Canopic jars they were stored.
   Then the body was covered in natron salts to dry.
   It took forty days to mummify.

2. By amulets protected, wrapped in linen bands and shroud,
   Surrounded by possessions, for the afterlife endowed.
   In coffin or sarcophagus, the body, embalmed,
   Was protected by the Book of the Dead’s magic spell charms.
   Grandest of all the tombs was a pyramid,
   Where the Pharaohs and their treasures from grave robbers were hid.
However, I was unhappy with some of the rhymes (four/stored, embalmed/charms), and the uneven syllable count for long lines that created “rushed” lyrics. I had already written two songs about Egypt, one of which was long (“Hieroglyphics”). To make “Mummies” shorter and easier to learn and remember, I changed the verses from six to four lines, and removed the duplicated term afterlife. Though I love the sound of the word sarcophagus I couldn’t justify including it. If I put it in the song, the students would think every mummy was placed in a sarcophagus, which was not the case, so I decided to err on the side of accuracy and brevity. I rewrote the song with more consistent syllable counts and even rhythmic flow, improving the rhymes, and adding an internal rhyme (died/mummified).

1. Mummies, mummies, in Egypt long ago,
   When you died, you were mummified, to the afterlife you’d go.
   First the organs were removed, four canopic jars occupied,
   Then in natron salts for forty days, the body was dried.

2. Wrapped in linen bands and shroud, by amulets protected,
   With magic spells and charms from the Book of the Dead.
   Possessions for the next life were placed in burial rooms,
   Especially the pyramids, the Pharaohs’ grand tombs.

As “Mummies” is placed after the song about the River Nile, which is in g minor, I decided to write this in C major for tonal contrast. To create harmonic interest and fun I used a flattened third (E flat) or minor tonality in the last phrase, on the words “body” and “Pharaohs’ [grand tombs]” as a musical pun, or wordpainting.

The most difficult song in this collection was the song about Chinese geography. I struggled for eighteen months to produce a song I am still not happy with. Much of my frustration was caused by the large amount of essential information, with lots of
geographical names and locations, the definition of “loess”, and the different climate regions. The first version was long.

1. Ancient China was isolated
   Because of its geography, where it is located.
   To the west tall mountain ranges, barren terrain,
   The Himalayas, Tien Shuan, and the Kunlun chain.

2. In China’s north the Plateau of Tibet is high and cold.
   Two vast deserts, Taklamakan and Gobi, it does hold.
   To the east the China Plain, a warm and fertile zone
   With monsoon rains, and rivers, where most of China’s food is grown.

3. The birthplace of Chinese civilisation
   Was the Huang He, Yellow River, with its irrigation.
   “Loess” is fine clay dust blown from the high plateau.
   This rich sediment made land fertile, grain easy to grow.

4. But the Huang He, “China’s Sorrow”, brought floods and destruction
   Controlled in part by levee and dike construction.
   Further south the Chang Jiang flows to the China Sea
   The world’s third longest river, also called the Yangzi.

5. China was protected by its geography;
   Mountains, deserts, southern jungles, to the east, the sea.
   They thought they were the world’s centre, so
   They called it the “Middle Kingdom”, or Zhongguo.

I tried all the usual tricks and techniques to improve the song. I left it to incubate while I worked on other songs and collected more data. I ignored everything I had already written and started over. I created new wordbanks and added words that might stimulate new rhymes. I became grumpy. I wrote new melodies for the different sets of lyrics. I sat at the piano and experimented, improvising new lyrics and melodies. I gave myself a non-negotiable deadline to complete the new version. I sulked. I pruned and tweaked, trimmed and moved lyrics around. I listened to traditional Chinese music. I went for long walks, hoping that a change of environment would spark new ideas or inspiration.

Journal entry, June 20, 2015
Eventually I decided the song was as good as it was going to get, at least this time around. I had added more facts: terrace farming, the mountains were not only a barrier to invasion, but also to trade, the deserts were high altitude with extreme temperatures, and canals were added to levees and dikes. Instead of each verse using the same melody, I used a six-line melody for the first two verses, while the third and fourth have a different four-line melody. So in the same total number of lines I was able to add more information with increased melodic and structural variety.

1. Ancient China’s civilisation
   Lived in isolation,
   Southern jungles, deserts, the Yellow and China Seas,
   And mountains formed natural boundaries:
   The Himalayas, Tien Shuan, and the Kunlun chain, a western barricade,
   A tall mountain wall, none could invade, but also a barrier to trade.

2. China’s northwestern Plateau of Tibet is barren and high.
   Its two vast deserts, Taklamakan and Gobi, with extreme temperatures, are very dry.
   In the east’s the China Plain, a warm and fertile zone,
   With big rivers and monsoon rains, where most of China’s food is grown.
   “Loess”, a fine clay dust blows down from the plateau.
   This rich sediment is excellent, makes grains easy to grow.

3. The Huang He, “Yellow River”, with its silt and irrigation,
   Canals, (and terrace farming) fed the nation.
   But “China’s Sorrow” it was also named, it brought mud and floods, and destruction.
   These disasters were partly tamed by dikes, canals, and levee construction.

4. Further south the Chang Jiang flows to the China Sea,
   The world’s third longest river, also known as the Yangzi.
   The Chinese believed their country was the centre of the world, so
   They named it the “Middle Kingdom”, Zhongguo, China, Zhongguo.
This cycle of curiosity, learning, self-doubt, frustration, isolation, and satisfaction continues throughout the process of composition. When a song is completed, I still have doubts about whether it is the best I can do, leading to further revisions and rewrites. Eventually I reach the plateau stage of diminishing returns and the realisation that the initial creative phase is finite. Rewrites can polish and refine (Collins, 2016), but also negatively affect a song (Jay-Z, 2011). Brahms wrote that “It is rare that a piece, once it has been completed, becomes better through revision; usually it gets worse” (Jenner, 1990, p. 200).

In writing a collection of songs, the composer is challenged to create a unique musical “tone” or style for each composition. The songs need to be distinctive yet complementary. This is achieved by introducing variety through different keys, melodic ranges, tempi, harmonic progressions, and musical styles. Another strategy changes the phrase length by adding either extra lines of lyrics to a final verse (as in “Julius Caesar”), or elongating the last notes of a phrase in order to surprise (as in “Sparta”, and the final chorus of “Julius Caesar”) (see Appendix A).

One of my supervisors questioned whether writing curriculum-based songs is actually creative. I pondered this and debated with my teaching colleagues, eventually deciding that it is. Kerr (2016) and Vernon (1989) defined creativity as producing something new or original, which could be a restructuring or invention, or an artistic object, and I believe my work falls into that category. I reasoned that Bach’s ecclesiastical works in his role as Cantor at St. Thomas in Leipzig were definitely creative, though written within a prescribed framework and form. My work involves similar restrictions and constraints, but also offers many opportunities for innovation and originality.
Journal entry, July 7, 2014

I also compose songs that are not educational. It can be liberating to write songs that are not curriculum-based, where I can be more expressive and imaginative. Writing about emotions can be cathartic. As seen in therapeutic song composition, writing songs about painful subjects allows the writer to step back from the experience and be more objective, yet still express the sentiments in a way that others can relate to. Hearing people laugh or cry at a song one has written is immensely powerful, and addictive.

Song composition is a flexible and idiosyncratic process. It is challenging and frustrating, yet rewarding when preparation, craft and illumination coincide. Moving from a general description to a deep analysis of my songwriting process, the next section describes the creation of three songs in more detail, and concludes with an overview of the sixteen songs and their distinguishing features.

6.4 Creating History Songs

6.4.1 Ancient Chinese Inventions and Discoveries

The least difficult songs to write are what I describe as “catalogue” songs, often called “list songs” (Effenberger, 2010) which are based on lists of vocabulary words. These songs do not require supporting lyrics that provide a background to the main concepts, so can incorporate a large number of words or facts into a short song. They essentially comprise a list of vocabulary words that can be written in almost any order, so rhyming words can be placed at the end of lyric lines without having to consider the
“sense” of the material. There is a feeling of accomplishment when writing catalogue songs in including as many as possible of the required terms or vocabulary.

This example of a catalogue song is about ancient Chinese inventions and discoveries, the final song in the collection. My first task was to research middle school social studies curricula on this specific subject from Australia, the U.K., Canada, and the United States (23 states, 38 school districts), collating a list of the essential vocabulary on the subject (ACARA; Athari-Banta, 2015; Dyrek, 2014; FCPS, 2012; LCS, 2014a; Mason, 2010; Simpson, 2015; WSS, 2014). I also utilised educational texts and websites designed for children in order to incorporate age-specific information and materials (AsiaSociety, 2015; Athari-Banta, 2015; Belzer, 2000; Bramwell, 2014; Breyer, 2010; Donn, 2011; Dyrek, 2014; Evans, 2011; Yates, 2000).

These resources provided the following list of inventions and discoveries from ancient China in middle school curricula. A check mark or tick shows which terms were incorporated into the song.

**Chinese inventions and discoveries curriculum material**

<table>
<thead>
<tr>
<th>Table 5 Chinese inventions and discoveries curriculum material (WB4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>seismograph ✓</td>
</tr>
<tr>
<td>rockets ✓</td>
</tr>
<tr>
<td>paper currency ✓</td>
</tr>
<tr>
<td>umbrella ✓</td>
</tr>
<tr>
<td>wheelbarrow ✓</td>
</tr>
<tr>
<td>fireworks ✓</td>
</tr>
<tr>
<td>kite ✓</td>
</tr>
<tr>
<td>decimal system ✓</td>
</tr>
<tr>
<td>mechanical clocks ✓</td>
</tr>
<tr>
<td>chess ✓</td>
</tr>
<tr>
<td>acupuncture ✓</td>
</tr>
<tr>
<td>calendar ✓</td>
</tr>
</tbody>
</table>

95
As described above, my next task was to identify rhyming word pairs, which could be placed at the end of paired lines, then to fill the rest of each line with required information. These pairs were umbrellas/propellers, paper currency/tea, and clocks/woodblocks. I rhymed “abacus” as the final term of the list with “ingenious” and “fabulous” to complete the song. I then added other terms from the list, being careful to place stressed syllables on beats, thereby avoiding syncopation. For example, the emphasis in the words “compass” and “paper” are on the first syllable. The terms that were not included (brandy and whiskey, helicopter rotor, and metal coins) were included in only one curriculum vocabulary list, so I deemed them to be less essential. I inferred “cast iron” in the term “iron ploughs” and implied “magnet” with the “compass”, while “multi-stage rockets” is an extension of “rockets”.

Nothing could be finer / Than to learn of Ancient China’s
Inventions and discoveries.
They were great pioneers, / So many brilliant ideas;
Our modern world is built on these
Chinese inventions:
Gunpowder, compass, paper, printing with woodblocks,
Fireworks, silk, and porcelain, mechanical clocks.
Wheelbarrows, iron ploughs, the calendar, kites, and tea,
The seismograph, horse collar harness, paper currency.
The decimal system, ice cream, chess, rockets, and umbrellas,
Acupuncture, rudders, steel, matches, and propellers.
Stirrups, sundials, lacquer ware, the wheel and abacus –
All Chinese inventions, so ingenious!
Yes, they’re all Chinese inventions, so fabulous!

Once I had finalised the lyrics, I had to create a melody. As I had already used traditional scales in two songs about ancient China (“Three Philosophies” and “Geography”), I was not constrained to write in a distinctly Chinese mode or style. I decided to base the tune on a melodic quote from “Chattanooga Choo Choo”. This is a popular American song from the swing era that was the first to be awarded a gold record in 1942 after
selling 1.2 million copies (Miller, 2017). The lyrics of the second verse are “You leave the Pennsylvania Station ‘bout a quarter to four / Read a magazine and then you’re in Baltimore. / Dinner in the diner / Nothing could be finer / Than to have your ham and eggs in Carolina” (Gordon, 1941). I altered the melody but retained the rhythm and rhyme so that “Dinner in the diner / Nothing could be finer” became “Nothing could be finer / Than to learn of Ancient China”.

In Figure 8 I illustrate the process of adding melody in solfa (do/d, re/r, mi/m, etc.) to the rhythmic notation of the lyrics. This process occurred over a period of two days, showing slight alterations as I reviewed the melody, and added harmonies. The note names added above the notation show a melodic bass line for the piano accompaniment. These were not the only revisions and alterations to this song, but are representative of my work process.

Example of composition revisions

Figure 13 Example of composition revisions (WB4)
The form of the song is introduction, two stanzas, and coda. The melodic range is a perfect octave from B flat below middle C to the B flat above, which is in the middle of most adolescents’ vocal range. It finishes with a descending blues scale that uses a flattened seventh, as well as adding a flattened fifth, in a chromatic pattern.

“Ancient Chinese Inventions and Discoveries” excerpt

![Ancient Chinese Inventions and Discoveries excerpt](WB4)  
© Aniko Debreceny 2015

This is almost exactly the same closing melodic motif as in the very first curriculum-based song I had written in 1992, “An Evening With the Stars”.

“An Evening With the Stars” excerpt

![An Evening with the Stars excerpt](WB4)  
© Aniko Debreceny 1992

The accompaniment was written in a swing style in 12 8 metre, appropriate to the 1940’s. I incorporated typical bass line patterns and chord progressions, with a standard “swing” two bar coda, ending on a jazz chord including the 7th and 9th notes of the chord (B flat major 7 9 / B flat, D, F, A, C) (see Appendix B).
6.4.2 Ancient Greece: Democracy

“Democracy” was written in stanza and chorus form, as I wanted to reinforce the basic facts about democracy through repetition. As mentioned in Chapter 2.6, repetition enhances retention (Calvert, 1993; Karpicke, 2012; Pindale, 2013), and repeated melodic cues further improve recall (Wallace, 1994).

I researched curricula from Australia, the UK, and the United States (11 states, 18 school districts), as well as a number of children’s textbooks and resources (Bowra, 1965; Cartledge, 2011; Connolly, 2001; Covert, 2012; Forrest, 1988; Gogerly, 2010; Kerrigan, 2011; Martell, 1993a; Pearson, 2004; Roberts, 1998; Steele, 2011), and educational websites developed for middle school students (Carr, 2016; KidInfo, 2014).

The major vocabulary terms and definitions are outlined in the following table.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oligarchy</td>
<td>rule by the few</td>
</tr>
<tr>
<td>Democracy</td>
<td>government by the people</td>
</tr>
<tr>
<td>Tyranny</td>
<td>rule of a tyrant or absolute ruler</td>
</tr>
<tr>
<td>Aristocracy</td>
<td>government or state ruled by an elite, or privileged upper class</td>
</tr>
<tr>
<td>Monarchy</td>
<td>hereditary, supreme power or sovereignty held by a single person</td>
</tr>
<tr>
<td>Polis</td>
<td>city state</td>
</tr>
<tr>
<td>Demos</td>
<td>people</td>
</tr>
<tr>
<td>Kratos</td>
<td>Rule</td>
</tr>
<tr>
<td>Aristoi</td>
<td>best people</td>
</tr>
<tr>
<td>Tyrant</td>
<td>leader of the aristocrats</td>
</tr>
<tr>
<td>Agora</td>
<td>gathering place, central meeting location</td>
</tr>
<tr>
<td>Citizen</td>
<td>resident of a place who owes allegiance to the government, and is entitled to its protection</td>
</tr>
</tbody>
</table>

The terms listed most frequently in the social studies curricula were monarchy, oligarchy, tyranny, aristocracy, democracy, and polis or city-state. I next created word banks of rhymes for the most important terms, as below. Again, check marks show the rhyme words used in the song.
“Democracy” rhymes

Table 7 ‘Democracy’ rhymes (WB2)

<table>
<thead>
<tr>
<th>Term</th>
<th>Rhymes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>peace, cease, piece, centrepiece, increase, decrease, masterpiece ✓</td>
</tr>
<tr>
<td>Democracy</td>
<td>monarchy ✓, aristocracy ✓, tyranny ✓, oligarchy ✓, B.C. ✓, free, sovereignty, entity, equality, authority, key, slavery, history, discovery, oversee, appointee, liberty, community, key, agree, responsibility ✓, philosophy, geography</td>
</tr>
<tr>
<td>City state</td>
<td>isolate, create, congregate, locate, populate, dominate, separate, delegate, Alexander the Great, educate, legislate, regulate, formulate, liberate, integrate, cultivate, intimidate, negotiate, annihilate, assimilate, capitulate, emancipate, cooperate, incorporate, incubate ✓</td>
</tr>
</tbody>
</table>

I wrote the lyrics first, then rhythm, and lastly added the melody and harmony. I utilised the chorus for the most important information, giving four brief definitions of the term democracy, and the date when it first appeared. Former American poet laureate Billy Collins’ (2016) comments about inserting rhyme into the middle of lines inspired me to use internal rhyming in the chorus, as well as at the end of each lyric line, pairing masterpiece/Ancient Greece, people/equal, B.C./responsibility, and matters/that is, a composite rhyme incubator/city state: A. The second verse lists the common forms of Greek government in chronological order: monarchy, tyranny, oligarchy and democracy.

The natural speech patterns of the lyrics were converted into musical rhythms. I placed an unexpected eighth note rest on the first beat of several bars with the word “democracy” to conform to the normal spoken emphasis on the second syllable of the word (democracy), and provide a breath for the singers (see Appendix B).

The song is written in D major, with three verses and chorus. The melodic range is from A below middle C to C# above middle C, a major 10th. The largest melodic interval is an ascending major sixth. The time signature is simple quadruple, or 4/4.
“Democracy” chorus edits

1. Three thousand years ago Greece was the incubator
For different forms of government, in each city-state: A
Community, or “polis”, to be ruled would agree,
By monarchs, tyrants, oligarchs; then came democracy.

   Chorus. Yes, a masterpiece from ancient Greece, democracy.
   “Rule by the people”, all men equal, democracy.
   In Athens in 510 BC – civic responsibility:
   Important matters voted on, that is, democracy.

2. Hereditary rule by kings or queens is monarchy,
Government by the few is oligarchy.
An elite upper class is an aristocracy,
While a popular, strong leader was called tyranny.   Chorus

3. This rule by the people to landowners votes gave,
But not if you’re a woman, foreigner, or slave.
Every ten days citizens would meet for a
Vote on civic matters, at the agora.   Chorus

6.4.3 Ancient Rome: The Legionaries’ Song

I wrote the songs for this project in chronological order of civilisations, so the
Ancient Rome songs were crafted during the third phase in my development as a
composer and lyricist. I researched curricula from Australia, the U.K., Canada, and the
United States (19 states and 26 school districts) (ACARA, 2014; ACSD5, 2014; ASD,
The Roman Empire’s history is an immense subject. For this project I selected the following topics: the history of the Republic, Julius Caesar, the armies and empire (“The Legionaries’ Song”), and the decline of the Roman Empire. One of the difficulties I encountered in writing the lyrics was the vast amount of information available.

Deciding which facts were essential was challenging, but the song had to be kept to a realistic length for middle school students to learn and retain, of four verses of four lines each, with chorus.

Like “The Decline of the Roman Empire”, written in the same week, “The Legionaries’ Song” was created quickly and easily. The lyrics were completed in two days, mainly because I had scores of pages of well-organised information and large wordbanks. It is intended to sound like a marching song for the conquering legions as they colonized Europe. It incorporates information about the structure of the army (legions and centuries), the Pax Romana, the geographic extent of the Empire, engineering advances and infrastructure, political structure, the first Caesar Octavian, the Colosseum and gladiators, slavery, Christianity, and currency.

I utilised a combination of catalogue song style, listing the contributions to civilisation brought by the Romans (e.g. aqueducts, bridges, canals, roads, and city water, public baths, lighthouses, concrete, arches and the dome) with general facts, such as the
number of soldiers in a century and legion. Again I used internal rhyming wherever possible to enhance retention, such as best/west/rest, and pioneering/engineering.

Another composite rhyme across lines paired “Pax Romana” with “calm. A”.

The key is E flat major, and the time signature is simple quadruple, or 4 4. This key was selected to provide a variety in key centre when all the songs are sung in order, as the previous song (“Julius Caesar”) is in G major, and the following song (“The Decline of the Roman Empire”) is in F major. The melodic range is a major 9th, from B flat below middle C to the C above middle C. The widest melodic interval is a descending perfect octave in the chorus, balanced by two ascending arpeggios that propel the melodic contour forward (see Appendix B).

1. We’re Rome’s legendary army, six thousand in each legion,
   Eighty in a “century” keep peace in every region.
   Our roads bring trade, communication, safe travel and calm, a
   Stable two centuries – the “Pax Romana”.

   Chorus  Rome is the best, we’ve conquered all the rest,
   From Egypt in the east, to Britain in the west.
   We build aqueducts and bridges, canals and roads well made,
   Everybody uses Roman currency for trade.

2. Octavian (Augustus) began our Empire’s story
   Of five centuries of Roman glory.
   Our Caesars aren’t all great like him, some bad, some mad, some cruel,
   Some are great generals; the whole Empire they rule.

   Chorus
   3. We love the chariot races and gladiators fighting
      At the Colosseum amphitheatre – it’s so exciting.
      Of course the Empire would not thrive without slavery;
      And the state religion’s everywhere – Christianity.

   Chorus

4. We bring trade, peace and order, and so much more:
   City water, public baths, heat under the floor!
   Lighthouses, concrete, strong arches, and the dome,
   Pioneering great engineering, a legacy of Rome.

   Chorus
As well as improving my actual songcrafting skills through reflection and self-criticism, I have also started to believe in my own abilities a little more. The process of analysing all my compositions and comparing them to other educational song materials has boosted my self-confidence.

A final reflection on my work contends, based on the definitions of creativity reported in Chapter II, that my compositions are creative artifacts in that they are new, original, artistic objects, which have been accepted as being of value (both historically by schools and my students, and currently by my composition supervisor). They are appropriate to their intended audience of middle school-aged students in content, vocabulary and vocal range.

**Project songs overview**

The following table provides an overview of the sixteen songs that form the product of my research.

**Project songs overview**

<table>
<thead>
<tr>
<th>Title</th>
<th>Key</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>The River Nile</td>
<td>g minor</td>
<td>traditional Egyptian scale, derived from flutes found in tombs</td>
</tr>
<tr>
<td>Mummies</td>
<td>C major</td>
<td>incorporates interesting harmonies switching between relative major and minor tonalities</td>
</tr>
<tr>
<td>Hieroglyphs</td>
<td>G major</td>
<td>incorporates interesting harmonies switching between relative major and minor tonalities</td>
</tr>
<tr>
<td>Ancient Greek Geography</td>
<td>G major</td>
<td>melody adapted from “Trava Trava”, a traditional Greek folk song</td>
</tr>
<tr>
<td>Athens</td>
<td>E flat major</td>
<td>2 bar introduction borrowed from well-known dance by Mikis Theodorakis for the movie “Zorba the Greek”, which was based on two traditional Cretan songs “Armenohorianos</td>
</tr>
</tbody>
</table>


Syrtsos”, and “Kritiko syrtaki” (Greeksongs, 2012)

<table>
<thead>
<tr>
<th>Title</th>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sparta</td>
<td>D major</td>
<td>syncopated rhythms, incorporates minor harmonies, flattened third (minor) at end of final melodic phrase</td>
</tr>
<tr>
<td>Democracy</td>
<td>D major</td>
<td>syncopated rhythms, internal rhyming especially in the chorus</td>
</tr>
<tr>
<td>History of the Republic</td>
<td>C major</td>
<td>incorporates minor harmonies, internal rhyming</td>
</tr>
<tr>
<td>Julius Caesar</td>
<td>G major</td>
<td>quotation “Veni, Vidi, Vici” in chorus, interesting harmonies, syncopated rhythms</td>
</tr>
<tr>
<td>Legionaries’ Song</td>
<td>E flat major</td>
<td>triadic chorus melody, octave interval</td>
</tr>
<tr>
<td>The Decline of the Roman Empire</td>
<td>d minor</td>
<td>introduction, extended second verse</td>
</tr>
<tr>
<td>Chinese Geography</td>
<td>d minor</td>
<td>uses a traditional Chinese pentatonic scale derived from ancient flutes, introduction in parallel fourths and fifths for “Chinese” harmonic effect, use of traditional Chinese gong and flute in score</td>
</tr>
<tr>
<td>Three Chinese Philosophies</td>
<td>a minor</td>
<td>uses a traditional Chinese pentatonic scale derived from ancient flute, introduction is unison octaves</td>
</tr>
<tr>
<td>Chinese Dynasties</td>
<td>C major</td>
<td>swing style, syncopated rhythms, chromatic harmonies</td>
</tr>
<tr>
<td>Chinese Inventions and</td>
<td>B flat major</td>
<td>swing style, based on “Chattanooga Choo Choo”</td>
</tr>
<tr>
<td>Discoveries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
My friend had graduated from her programme, so we celebrated with another pot of tea, while reminiscing about her experiences during her studies. I asked her what was the most important point that she had gained from the course.

“Sadly, I see that most of the work I did was neither relevant nor useful to the actual process of educating my students,” she replied. “I feel that I spent most of my time jumping through hoops in order to gain a credential which won’t necessarily lead to advancement in my current position. How do you feel about what you have been studying and working on?”

I had to stop and think carefully about this question. Did the process of investigating music and song in education and through history change my work or myself for the better?

“I don’t know”, I slowly replied. “On one hand, I feel isolated, frustrated by the challenges of being a distance student and the changes my supervisors have requested. However, I also feel that I have made real progress in understanding what I am trying to do, and how I work. The songs I am writing now are far superior in so many ways to those I wrote when I first started.”

“In what ways?” she enquired.
“Firstly, they are far more rigorously researched, and conform to national curricular guidelines. They could be used in any school district in the United States, and hopefully internationally. My lyric-writing abilities have improved, especially through my use of word-banks. My lyrics are more succinct and fact-based, very different from the ‘Birkenstocks and fuzzy socks’ style of the Waldorf schools perspective. I also revise and rework my songs many more times than I used to, so the songs are constantly being improved and refined.”

“Do you think you are a better teacher or song-writer now?” she asked.

“Absolutely. I am not yet a polished academic writer, and I still have a long way to go, especially to find a platform for my work where the songs can help more students learn. However, I feel that I now belong to the long tradition of bards and poets who have used music as a vehicle for communication and memory.”

“Then you have achieved your goal,” she smiled.

Bards and poets sang
their lives, their worlds. I too, of
old times in new rhymes.

Introspection – a
dark mirror with flashes of
light, understanding.

I’m a chicken – I
Reflection

By the time I reached the fourth set of songs about ancient China, my creative process was far more efficient. My modus operandi had advanced from my earliest simple efforts of twenty-five years ago, where I utilised far less data. This was in part because in pre-Internet days, it was far more difficult to gather information, and I was limited to what was available in my local libraries. Now with instant access to information online, vast amounts of research materials are readily available.

Having already researched curricula for three previous ancient civilisations, I had identified the most useful sources, which saved time. My strategy was established, so the process flowed smoothly through examining the curriculum, concepts and essential vocabulary, creating word banks, lyric writing, then adding melody and harmony.

This change in practice and greater understanding of the methodology led to a new awareness and utilisation of the essential elements of song production. I deliberately altered my perspective while working, switching between focusing on the product and the process, constantly analysing my approach and output. I realised how much my previous experience and traditional musical vocabulary shaped my work, so deliberately introduced elements from different musical traditions, such as new scales and modes, poetic structure, and rhythmic and harmonic forms.
CHAPTER VII

DISCUSSION AND CONCLUSION

The purpose of the current research was to answer the question: How has my process of researching, writing, and scoring curriculum-based songs changed as I engaged with the literature in the process of writing a thesis? A literature review investigated how song has been used in education to improve learning, retention, and recall, and the characteristics and conventions of writing successful songs. A review of the creative process of writing songs for children accompanied an autoethnographical account of the researcher’s personal journey.

Song has been an essential medium of communication, social bonding, and instruction from the earliest civilisations. It is used to both positive and negative effect. Beneficial applications include its utilisation in coordinating work, healing, worship and ritual, entertainment, inspiration, nationalism, and as non-violent resistance. Negative uses of music and song include the use of sound as torture, indoctrination, and social control.

Summary of Findings

The use of song as a vehicle for mnemonics improves encoding and retrieval (Gfeller, 1983; Wallace, 1994). Songs are frequently utilised in learning a second language (Chuang, 2016). This pedagogy may be useful because of the word-per-minute speed, which is approximately half that of normal speech (Kilgour, 2000; Murphey, 1992).
Research also presented contrasting results, where sung or spoken presentations led to similar word recall, improving only through reiteration and rehearsal (Pindale, 2013). Music may also hinder memory performance by dividing students’ attention (Ferreri, 2016).

Repetition was found to enhance learning and memorisation (English, 2014) though not comprehension (Calvert, 2008). Songs should be relevant and motivational (Governor, 2011). The most effective songs use repetitive melodies written in a familiar style, consistent and simple rhythms, and strong rhymes (Gfeller, 1983).

The methodology employed in this thesis was evocative ethnography. This examined my own experiences and emotions, reflecting on my creative journey and the evolution of my writing process. The data is gathered from my field texts, the personal journals and workbooks maintained throughout the project. I have included three vignettes that are reflections about my previous composition and teaching experiences, as well as haiku poems as commentary on my progress.

The literature review presented an overview of creativity and musical composition, and a description of the songwriting process. I illustrated how my songwriting process developed over time, comparing several songs from earlier in my career with my current work, and concluded with a more comprehensive narrative chronicling the development of three songs.

The investigation of other composers’ and writers’ methods has led to a greater understanding of my creative process, and the conscious employment of new techniques and work practices, such as complex and internal rhyme schemes. Identifying the characteristics of successful songs has enabled their selective adoption in my own work.
One specific limitation to this current study is that I am not testing my own curriculum-based songs in a school setting. A logical next step would be to expand the study to include testing in the classroom, using quantitative and qualitative assessments to evaluate the effect of using songs created specifically for teaching a history curriculum. A longitudinal study over multiple years would investigate the effects of singing as an instructional strategy on students’ learning and attitude towards singing for learning. This further research would also include a study of collaborating with classroom teachers to investigate how best to improve their skills and confidence in using song as a pedagogical tool in the general classroom.

Another perceived limitation to this study is the subjective nature of the analysis. Autoethnography has been described as self indulgent, emotional writing that lacks validity and rigour (Ellis, 2010). This viewpoint emerges from the fields of quantitative and scientific inquiry. However, autoethnography offers a “holistic, engaging, integrative and authentic picture of human existence” (Buripakdi, 2016, p. 69). It can “humanize research and make research more relevant, accessible, and meaningful to others (Denzin, 2016, p. 672). Personal narrative offers an appealing, accessible description that connects the researcher’s experience to the reader’s life, illustrating the process of change and potentially transforming the reader.

As one possible means of potential change, this study outlines a template for other educators who may wish to create curriculum-based songs for their own classrooms as shown in Table 9. This is obviously not an exhaustive methodology, as there is insufficient space in this thesis. However it offers a guideline for teachers and students to
follow when creating their own songs for learning, with suggestions gained from my twenty-five years of experience in writing educational songs.

Table 9 Template for composing curriculum-based songs

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>Identification and definition of the problem and collection of data, gaining knowledge. Research into curriculum, gathering of information</td>
</tr>
<tr>
<td>Recursion of Incubation and Illumination</td>
<td>A cycle of conscious and unconscious processing of the problem and materials</td>
</tr>
<tr>
<td>Verification</td>
<td>Evaluation, elaboration and analysis to test, examine and revise the solution</td>
</tr>
<tr>
<td>Product</td>
<td>Completion and publication as the tangible expression of creativity</td>
</tr>
</tbody>
</table>

This process aligns closely with the models of creativity and composition as illustrated in Table 1 and Table 2. The first step is to list the essential curriculum facts and vocabulary, then rank them in order of importance. Most children’s songs are short, up to four verses of four lines to keep them easy to learn and remember. It is preferable to write several short songs about a topic rather than one with many verses that may be difficult to recall.

The next task is to create word banks of rhyming words for the essential words and terms. It may be helpful to write out the basic facts that the students are required to learn in short phrases, as common speech patterns make it easier for students to absorb and retain the information. These “fact phrases” will also provide a list of other potential rhyming words and help establish the song lyrics’ order of facts and sequence.

These rhyme pairs and phrases are expanded into rhyming couplets, pairs of lines usually of the same length and number of beats. The rhyme pattern is usually AABB,
though other more complex rhyme patterns such as internal or composite rhymes, assonance, consonance, and alliteration are engaging and therefore improve retention. These couplets are usually combined into four-line stanza form. The word stress pattern or lyric rhythm is usually four strong accents or syllables in each line of lyrics (iambic pentameter). Important words or syllables should be placed on strong musical beats in the bar for added emphasis, while unimportant words such as “the” and “and” should be placed on off or weak beats.

Including as many as possible of the essential vocabulary words listed will help students remember the terms, their meaning, and context. Key facts should be placed in the chorus, where further repetition will enhance learning and retention.

Melody creation is the next phase of the process. Educators and students who are not musically confident can use parodies or “piggyback” songs, with new lyrics for learning set to well-known melodies. Parody songs lower students’ affective filter and improve motivation and learning outcomes (Boothe, 2015). However, creating original melodies will enhance the students’ retention, as studies show that using well-known melodies with new lyrics can lead to confusion over which set of lyrics to retrieve (Serafine, 1986). Children’s songs are usually syllabic, with one syllable per note.

The key and melodic range will depend on the age and vocal abilities of the target grade level, but is generally limited to one octave above middle C or D. Melodic contour should be mostly stepwise, though wider intervals generate interest and variety. Successful melodies balance predictability and continuity with variety or surprise (Hellmer, 2005).
Finally, my research reveals how the approach to writing curriculum-based songs is different to writing popular songs. While many of the musical elements are the same, the lyrics in curriculum-based songs are based on facts rather than the expression of emotions such as love, grief, pride, or patriotism. The curriculum establishes the essential materials to be conveyed in the song, necessitating an extra initial preparation phase of intense study to gain deep knowledge of the specific curriculum topic. This requires a different approach to lyric writing in that the text must be accurate, complete, and correctly sequenced, while incorporating the elements of successful children’s and popular songs. It is a specialised creative skill that is time consuming to master, yet tremendously rewarding and fulfilling.

The researcher must also be aware of the methodology of how the subject will be taught at that particular grade level, and the appropriate levels of vocabulary and choral skills and abilities of the intended audience. This is another research area that is not well investigated, and offers further scope for future studies.
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APPENDIX A

Lyrics

Ancient Egypt

The River Nile

The River Nile was the foundation
Of Ancient Egypt’s civilisation.
Flowing south to north, it flooded every spring,
Dark, rich fertile silt the waters did bring.
Farmers built canal systems for irrigation,
To grow wheat, flax, barley, grass for beef: with fish, it fed the nation.
Geography helped Egypt be protected from attacks,
By the northern Delta shallows; in the south, six cataracts.
The Nile, more than four thousand miles of free transportation,
The longest river in the world, the “Gift” of Egypt’s nation.

Hieroglyphs

For more than thirty centuries ancient Egypt was great,
With Pharaohs, mummies, and pyramids: the world’s first nation state.
One main reason why Egypt was so terrific
Was their invention of the hieroglyphic.

Writing in pictographs, symbols, and signs,
Hieroglyphs – each one a different meaning defines.
Records of trade, the money that was paid,
Crops and weather, medical texts, designs for building grand projects.
Taxes, army records, laws, supply lists of needed stores.
All written in symbol and sign, for each word, pictographs combine.

Papyrus reeds made the world’s first paper sheets,
For scribes to write laws, poems, bills, books, prayers and receipts.
An edict written in Demotic, and Greek, and hieroglyphs unknown
Was deciphered by Champollion in 1822: the Rosetta Stone.
Written from the top, or left, or right – just check the faces.
They always look to the start of the line, with no vowels or spaces.

For more than thirty centuries ancient Egypt was great,
With Pharaohs, mummies, and pyramids: the world’s first nation state.
One main reason why Egypt was so terrific
Was their invention of the hieroglyphic.
Mummies

Mummies, mummies, in Egypt long ago,  
When you died, you were mumified, to the afterlife you’d go.  
First the organs were removed, four canopic jars occupied,  
Then in natron salts for forty days, the body was dried.  

Wrapped in linen bands and shroud, by amulet protected,  
With magic spells and charms from the Book of the Dead.  
Possessions for the next life were placed in burial rooms,  
Especially the pyramids, the Pharaohs’ grand tombs.

Ancient Greece

Geography

Greece’s history was written by its geography:  
Two peninsulas, and islands, surrounded by three seas.  
Four fifths of Greece is mountains, each valley isolated,  
So hundreds of independent city-states were created.  

Greece lacked natural resources, water, or fertile land.  
To grow enough food, Greece needed to expand.  
The seas became Greek highways as they traded far and wide  
Silver, oil, wine, and pottery for food, slaves, timber, flax, and hides.  

From Egypt to France they built trading posts, then colonies,  
All around the Mediterranean, and the Black Seas.  
Greek trade brought coins, the alphabet, and democracy,  
Medicine, philosophy, theatre, and more: all Greece’s legacy.

Democracy

Three thousand years ago Greece was the incubator  
For different forms of government, in each city-state.  
A community, or “polis”, to be ruled would agree  
By monarchs, tyrants, oligarchs; then came democracy.

Chorus

Yes, a masterpiece from ancient Greece – democracy.  
“Rule by the people”, all men equal – democracy.  
In Athens in 510 BC – civic responsibility.  
Important matters voted on, that is – democracy.
Hereditary rule by kings or queens is monarchy,  
Government by the few is oligarchy.  
An elite upper class is an aristocracy,  
While a popular, strong leader was called tyranny.  

Chorus

This rule by the people to landowners votes gave,  
But not if you’re a woman, foreigner, or slave.  
Every ten days citizens would meet for a  
Vote on civic matters, at the agora.  

Chorus

Athens and Sparta

Of all Greek city-states, Athens and Sparta were the greatest  
But they had few similarities.  
Both religion and language were shared, but when the two are compared,  
It’s no wonder they became enemies.  
Athens on the coast of the Aegean was the most  
Successful of the times at trade.  
Landlocked Sparta was poor – to feed its people, went to war,  
Its neighbours did invade.

Athens, in Attica, the Delian League ruled,  
In sports, arts, and philosophy boys were schooled.  
Men joined the army for just two years,  
While women stayed at home, housework and textiles their careers.  
A hundred thousand slaves worked in homes, farms, and mines.  
Trade brought wealth and luxuries, fine foods and wines.  
Literature, art, drama, law, Athens’ legacy,  
With architecture, medicine, and democracy.

The Peloponnesus Sparta did rule.  
At seven, boys went to harsh military school.  
Taught to steal to survive, their soldiers were brave;  
More freedoms than elsewhere to their women they gave.  
Helots to their masters gave half of what they grew,  
An oligarchy ruled, with senate and two  
Kings, an assembly, and overseers five.  
Sparta’s legacy: war, and simple, hard lives.

On one occasion, the Persian invasion,  
Athens and Sparta fought as one.  
Athens’ navy won great fights, as did Sparta’s hoplites,  
Together the Persian war was won.  
Then based on tributes paid, rivalries and trade  
Routes, the Peloponnesian War we see,
Athens’ navy won at sea, But Sparta had the best army,  
And defeated them in 404 B.C.

Athens

Athens, in Attica, the Delian League ruled.  
In sports, arts, and philosophy boys were schooled.  
Men joined the army for just two years,  
While women stayed at home, housework and textiles their careers.  
A hundred thousand slaves worked in homes, farms, and mines;  
Trade brought wealth and luxury, fine foods and wines.  
Literature, art, drama, law – Athens’ legacy,  
With architecture, medicine, and democracy.

Sparta

Sparta, the leader, a part of  
The Peloponnesian peninsula and League.  
Sparta, life was so hard, a  
Poor, dry, land-locked state, with an agricultural economy.

To harsh military school boys at seven were sent,  
Taught to steal to survive, as soldiers men’s whole lives were spent.  
Spartan women had more freedoms than other Greeks,  
But their babies were killed, if they were weak.  
All Spartans were taught respect for elders,  
And to be stoic, to rarely speak.

Helots, or serfs, Sparta’s conquered neighbours,  
To their masters gave half their crops, their labours.  
Ruled by a military oligarchy,  
With two kings, five overseers, a senate and assembly.

Sparta, its unwritten charter,  
To be self-sufficient and despise luxury.  
Sparta, austere and insular,  
A strong stoic state, with a great military.
Ancient Rome

History of the Republic

Romulus and Remus were twins, the legends say,
By their great-uncle in the Tiber River they were thrown away.
Rescued by a she-wolf, they each built a town and home,
But when insulted, Romulus assaulted Remus, killed him and founded Rome.

Protected by the Alps, the narrow peninsula
Was a great central location for trade near and far.
Ruled by seven Etruscan kings, in 509 B.C.
Rome became a republic, for almost five centuries.

The Senate “patricians” by tradition were rich nobility,
While “plebeian” meant to be a common man, the majority.
Rome kept expanding through trade, conquest, and wars.
The Law of Twelve Tables was the written code of laws.

The Roman Republic – where the power was shared
By the Senate and four Assemblies, with two consuls paired.
Later tribunes to represent plebeians were elected.
This checks and balances system meant all rights were protected.

Rome was built on seven hills, first ruled by seven kings.
Five centuries a Republic, then the Empire brings
Trade and wars, peace and laws across a vast zone:
The amazing history of Ancient Rome.

Julius Caesar

Chorus

Veni, vidi, vici: “I came, I saw I conquered.”
Julius Caesar, Roman conqueror, he’s a, Great man in history.

Julius Caesar was born in 100 B.C.,
A general and statesman extraordinary.
He conquered Gaul, invaded Britain, he never lost a war,
But he grew too powerful, so was assassinated in 44.

One of the First Triumvirate, the Rubicon he crossed.
This treason led to civil war, which Pompey lost.
Caesar reformed the calendar, the first news sheet created,
Wrote anti-extortion laws, grain for the poor regulated.
Elected dictator, he ruled Egypt to Gaul,
But the Senate feared his power, that the Republic would fall.
On the Ides of March in 44 BC
Sixty senators stabbed him to death, a conspiracy.
Little did they know their plot would backfire,
Octavian Augustus, Caesar’s great-nephew, then started the Empire.  *Chorus*

Legionaries’ Song

*Chorus*  Rome is the best! We’ve conquered all the rest,
From Egypt in the east to Britain in the west.
We build aqueducts and bridges, canals and roads well made,
Everybody uses Roman currency for trade.

We’re Rome’s legendary army, six thousand in each legion,
Eighty in a ‘century’ keep peace in every region.
Our roads bring trade, communication, safe travel and calm, a
Stable two centuries – the ‘Pax Romana’.

Octavian (Augustus) began our Empire’s story
Of five centuries of Roman glory.
Our Caesars aren’t all great like him, some bad, some mad, some cruel,
Some are great generals; the whole Empire they rule.  *Chorus*

We love the chariot races and gladiators fighting
At the Colosseum amphitheatre – it’s so exciting.
Of course the Empire would not thrive without slavery;
And the state religion’s everywhere – Christianity.  *Chorus*

We bring trade, peace and order, and so much more:
City water, public baths, heat under the floor!
Lighthouses, concrete, strong arches, and the dome,
Pioneering great engineering, a legacy of Rome.  *Chorus*

The Decline of the Roman Empire

You know, the decline of the Roman Empire took several centuries,
With a multitude of reasons, including these:
Corruption and inflation, attacks and invasions, economic instability;
Disease and plague, fewer slaves and a huge trade deficit led to devalued currency.
Vandals, Visigoths, and Huns attacked the north and west,
While by ever-higher taxes the people were oppressed.
Dependence on slavery, internal power struggles, and civil wars,
The high costs of public works and the armies, another cause.
The empire paid for the gladiators and fed the unemployed. A smaller population and German tribes’ migration meant the army deployed Barbarian troops, but that was a big “Oops!” because they became well-trained foes. They sacked Rome in two conflicts, then in 476, the last emperor was deposed. But the empire had split in two; while the west fell, the east grew, and as the Byzantine Empire thrived For another thousand years, ‘til the Ottomans appeared, what once was Rome’s Empire survived.

**Ancient China**

**Geography**

Ancient China’s civilisation
Lived in isolation,
Southern jungles, deserts, the Yellow and China Seas,
And mountains formed natural boundaries:
The Himalayas, Tien Shuan, and the Kunlun chain, a western barricade,
A tall mountain wall, none could invade, but also a barrier to trade.

China’s northwestern Plateau of Tibet is barren and high.
Its two vast deserts, Taklamakan and Gobi, with extreme temperatures, are very dry.
In the east’s the China Plain, a warm and fertile zone,
With big rivers and monsoon rains, where most of China’s food is grown.
“Loess”, a fine clay dust blows down from the plateau.
This rich sediment is excellent, makes grains easy to grow.

The Huang He, “Yellow River”, with its silt and irrigation,
Canals, (and terrace farming) fed the nation.
But “China’s Sorrow” it was also named, it brought mud and floods, and destruction. These disasters were partly tamed by dikes, canals, and levee construction.

Further south the Chang Jiang flows to the China Sea,
The world’s third longest river, also known as the Yangzi.
The Chinese believed their country was the centre of the world, so They named it the “Middle Kingdom”, Zhongguo, China, Zhongguo.

Three Philosophies

In ancient China there were three
Very different philosophies.
Legalism ruled through harsh, strict laws and fear,
The laws, rewards, and punishments were very clear.
Confucius’s goals were peace and harmony
Through good relationships, like filial piety.
Collected by his student Mengzi are the “Analects”,
His teachings, ethical and moral texts.

Honour elders and tradition, practice moderation,
Keep your promises, and improve through education.
The civil service used these ideals in its examination,
Success through merit improved the administration.

Taoism, the “Way”, was taught by Laozi,
The symbol Yin and Yang shows balance and harmony.
Live simply, as in nature, with very few rules,
With compassion, moderation and humility, the Dao’s “Three Jewels”.

Dynasties

China was ruled by a series
Of ruling families, called dynasties.
The “dynastic cycle” is clear to see:
At first ruled well, the regimes fell as tyranny,
Corruption, high taxes, natural disasters,
Led to rebellion, and new China’s masters.

*Chorus*
Shang, Zhou, Qin, and Han,
Sui, Tang, Song, Yuan,
Ming, Qing, history’s
Great Chinese Dynasties.

The “Mandate of Heaven” said a dynasty
Was approved to rule while there was peace and prosperity.
But disasters meant the gods’ support was withdrawn,
In rebellion, a new dynasty would be born.
The first emperor, Shi Huangdi, standardised weights and law,
Coins and writing; he built roads and started the Great Wall.

*Chorus*
The Han expanded Silk Road trade and borders far and wide,
The Sui built the Great Canal, the Great Wall fortified.
The Tang are best remembered for gunpowder, scrolls, and tea,
The Song movable type and compass their legacy.
The Yuan invented paper currencies,
The Ming rebuilt the Great Wall, and sailed faraway seas.

*Chorus*
The Great Wall and the Silk Road

The Great Wall of China was built to protect China from invading tribes – a huge project. Shu Huangdi, first emperor, gave the orders To build a wall, wide and tall, along the northern borders.

Different dynasties, especially the Ming, Added to the Wall from the west to near Beijing. Five thousand kilometres long – it was immense, With watch towers, garrison towns, and an army for defence.

The Silk Road, several trade routes, began In the Han Dynasty. Its caravans Rode over five thousand kilometres) of harsh terrain, Burning deserts, high mountains, and cold windswept plains.

To Europe and the world they traded luxuries, Gold, textiles, jade, jewels, silk and spice, ivory, and teas. Horses, camels, slaves and plants, medicines and dyes, Also knowledge, culture, and beliefs, like Buddhism’s rise.

Inventions and Discoveries

Nothing could be finer Than to learn of Ancient China’s Inventions and discoveries. They were great pioneers, So many brilliant ideas; Our modern world is built on these Chinese inventions:

Gunpowder, compass, paper, printing with woodblocks, Fireworks, silk, and porcelain, mechanical clocks. Wheelbarrows, iron ploughs, the calendar, kites, and tea, The seismograph, horse collar harness, paper currency. The decimal system, ice cream, chess, rockets, and umbrellas, Acupuncture, rudders, steel, matches, and propellors. Stirrups, sundials, lacquer ware, the wheel and abacus – All Chinese inventions, so ingenious! Yes, they’re all Chinese inventions, so fabulous!

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APPENDIX B
Ancient Civilisation Songs

Ancient Egypt
The River Nile 2

Aniko Debreceny

Moderato

world’s longest river is in Egypt, the Nile. Its annual floods brought rich, black silt to

make the land fertile. Farmers built canals, systems for irrigation, to grow

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wheat, flax, bar-ley, fod-der for beef, with crops, fish, and ducks and geese, the Nile fed the
na-tion.

Homes were built of mud bricks, while pa-py-rus ver-sa-tile, Used for
boats, rope, food, and scrolls, grew on the banks of the Nile. Geography helped Egypt be protected from attacks. By the northern Delta shallows, in the south, six cataracts. Flowing south to north, a free means of transportation, The
"Gift of the Nile" made the "Black Land" fertile, and gave birth to Egypt's nation.
Mummies

Aniko Debreceny

Allegretto

Mum-mies, mum-mies, in E-gypt long a-go,

When you died, you were mum-mi-fied, to the after-life you'd go. First the

or-gans were re-moved, four ca-no-pic jars oc-cu-pied, Then in na-tron salts for forty days, the

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2 10

bo- dy was dried.

13

Wrapped in lin- en bands and shroud, by am- u- lets pro- tec- ted, with

15

magic spells and charms from the Book of the Dead. Pos- ses- sions for the next life were

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placed in burial rooms, Especially the pyramids, the Pharaohs' grand tombs.
Hieroglyphs III

Aniko Debreceny

For more than thirty centuries Egypt was great, With

Pharaohs, mum-mies, and pyra-mids, the world's first na-tion state. One main rea-son why

they were so ter-ri-fic, Was their in-ven-tion of the hier-ogly-phic. Scribes wrote pic-to-graphs,

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Hieroglyphs III

Symbols and signs, Each one an object, sound or idea defines.

Written from the top, or left, or right, just check the faces. They all face the start of the line, with

No vowels or spaces. Papyrus reeds made the world's
placed in burial rooms, especially the pyramids, the Pharaohs’ grand tombs.
Ancient Greece Geography

melody adapted from Trava Trava, a Greek folk song

Aniko Debreceny

Moderato

Greek history was written by its geography.

Two peninsulas, and islands, surrounded by three seas. Four fifths of Greece is mountainous, each valley isolated. So
hundreds of independent city states were created.

Greece lacked natural resources, water, and fertile land. To grow enough food, Greece needed to expand. The seas became Greek
high-ways, as they traded far and wide,
Silver, pottery, wine, wool, and oil for

timber, and food, slaves, grain, flax, and hides.
From

Egypt to France they built trading posts, then colonies. All around the Mediterranean
a-nee-an, the Black and Ae-gae-an Seas. Greek trade brought coins, the

al-pha-bet, thea-tre, cul-ture, and de-mo-cra-cy, Math-e-ma-tics,

me-di-cine, philo-so-phy, a-stron-o-my, and more, All Gree-ce’s le-ga-cy.
Ancient Greece - Athens 2

Athens, in Attica, the

Delian League ruled. In sports, arts, and philosophy boys were schooled.

Men joined the army for just two years, while women stayed at home, textile and

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house work their careers.

A hundred thousand slaves worked in homes, farms, and mines; Trade brought wealth and luxury, fine foods and wines.

Literature, art, drama, law, Athen's legacy, With architecture, medicine, the
and democracy. Yes, and democracy.
Ancient Greece - Sparta 5

Allegro

Sparta, the leader, a part of the Peloponnesian Peninsula and League.

Sparta, life was so hard, a land-locked, dry state
with an agricultural economy.

military school boys at seven were sent, Taught to steal to sur-

vive, as soldiers men's whole lives were spent. Spartan women had more freedoms.
than other Greeks, but their babies were killed if they were weak. All

Spartans were taught respect for elders, and to be stoic, to rarely speak.

He- lots, or serfs, Sparta's conquered
neigh-bours,  
To their masters gave half their crops, their labours.

Ruled by a military oligarchy, Two kings, Five over-seers, A Senate, and assembly.

Sons were told to come home with or on their shield; To fight bravely, with honour, and
ne-VER YIELD.

Spar-ta,
its un-writ-ten char-ter,
to be self-suf-fi-cient, and des-pise lux-u-ry.

Spar-ta,
its arm-y, the main part of Its

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strength, with a hard, simple life, and their stoic legacy
Ancient Greece - Athens and Sparta

Of all Greek city-states, Athens and Sparta were the greatest, but they had few similarities. Religion and language were shared, but when the two are compared, it's no wonder they became ene...
CONSTRAINED CREATIVITY

Athens on the coast of the Aegean was the most successful of the times at trade. Land-locked Sparta was poor, to feed its people, went to war. Its neighbours did invade.

On one occasion, the Persian invasion,
Athens and Sparta fought as one. Athens' navy won great fights, as did

Sparta's hoplites, Together, the Persian War was won. Then

based on tributes paid, rivalries and trade routes, the Peloponnesian War we
Ath-En's na-vy won at sea, but Spar-ta had the best ar-my. And de-

feated them in 404 B.C.
Democracy 5

Allegretto

Aniko Debreceny

1. Three thousand years ago Greece was the incubator, For

different forms of government, in each city-state. A community, or "polis" to be

ruled, would agree, By monarchs, tyrants, oligarchs, then came democracy.
Democracy 5

11
Em7  A  D  G  (F#)
Refrain
Yes, a masterpiece from ancient Greece, democracy.

14
Em7  A  D  G  D
"Rule by the people", all men equal, democracy. In Athens in 510 BC,

17
Em7  A  Bm  F#m  G  Em7  A  D  Fine
civic responsibility; important matters voted on, that is democracy.
Democracy 5

20  Em7  A  D  Em7

2. He-re-di-ta-ry rule by kings or queens is mon-ar-chy,

Gov-ern-ment by the few is o-l-i-gar-chy. An e-lite up-per class is an

a-ris-to-cra-cy, While a pop-u-lar, strong lead-er was called ty-ran-ny.

to Refrain

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Democracy 5

This rule by the people to land-owners votes gave, But not if you're a woman, a foreigner, or slave. Ev'ry ten days citi-
zens would meet for a Vote on civic matters, at the a-gor-a.

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Ancient Rome History of the Republic 2

Aniko Debreceny

Ro-mu-lus and Re-mus were twins, the legends say. By their
great-uncle in the Ti-ber River they were thrown a-way. Res-cued by a she-wolf, they each
built a town and home. But when in-sul-ted, Ro-mu-lus as-saul-tered

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Re-mus, killed him, and found-ed Rome.

...ted by the Alps, the nar-row pen-in-su-la Was a great cen-tral lo-ca- tion for

trade, near and far. Ruled by se-ven E-trus-can kings, then in 509 B.C.
Rome became a Republic, for almost five centuries.

The Senate 'patrians' by tradition were rich nobility, while 'ple-

bian' meant to be a common man, the majority. Rome kept expan-

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trade, conquest, and wars. The Law of Twelve Tables was the written code of laws.

The Roman Republic, where the power was shared by the Senate and four Assemblies, with two consuls paired. Later tribunes to represent plebeians...
be-ians were e-lec- ted, This checks and ba-lan-ces sys tem meant all rights were pro-
tec-ted. Rome was built on se-v en hills, first ruled by se-v en kings. Five cen-
tu ries a Re-pub lic, then the Ro-man Em-pire brings Trade and wars, peace and laws, a-

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cross a vast zone, The a-ma-zing his-to-ry of An-cient Rome.
Ancient Rome - Julius Caesar

Chorus
Ve-nei, vi-di, vi-ci, "I came, I saw, I con-quered."

Ju-li-us Caes-ar, Ro-man con-que-ror, he's a great man in his-to-ry.

1. Ju-li-us Caes-ar was born in one hun-dred B. C., A
general and leader extraordinary. He conquered Gaul, invaded Britain, he never lost a war, but he grew too powerful, so was murdered in forty four. Chorus: Veni, vidi, vici, "I came, I saw, I
conquered."  

Ju-li-us Cae-sar,  Ro-man con-que-ror, he's a_

great man in his-to-ry._  
2. One of the First Tri um-vi-rate, the

Ru-bi con he crossed.  This trea-son led to ci-vil war, which Pomp-ney lost.
But the Senate feared his pow'r, that the Republic would fall.

On the Ides of March in forty-four B. C. Sixty senators stabbed him to death, a conspiracy. Little did they know their plot would backfire. Octavian Augustus, his great- nephew and heir then founded the Empire.
Ven-i, vi-di, vi-ci, He came, he saw, he con-quered. Ju-li us Cae sar, Ro-man con-que-ror, he's a great man in his-to-ry.
Ancient Rome: Legionaries' Song

Aniko Debreceny

We're Rome's legendary army, six

thousand in each legion, Eighty in a 'century' keep peace in every region. Our

roads bring trade, communication, safe travel, and calm, A stable two centuries, the

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Constrained Creativity

 Pax Roma-na'. Chorus Rome is the best! We’ve conquered all the rest, From

 E-gypt in the east to Bri-tain in the west. We build a-que-ducks and bri-dges, ca-

 nals and roads well-made, Ev-ry bo-dy uses Ro-man cur ren cy for trade.

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Octavian (Augustus) began our Empire's story Of five centuries of Roman glory. Our Caesars aren't all great like him, some bad, some mad, some cruel;

Some are great generals, the whole Empire they rule. Chorus

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love the chariot races, and gladiators fighting, At the Colosseum amphitheatre,

it's so exciting. Of course the Empire would not thrive without slavery, And the

state religion everywhere, Christianity. Chorus We bring
trade, peace, and order, and so much more: City water, public baths,

heat under the floor! Light houses, concrete, strong arches,

and the dome, pioneering great engineering, a legacy of Rome. Chorus

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Ancient Rome: the Decline of the Roman Empire

Aniko Debreceny

Moderato

You know the decline of the Roman Empire took several centuries, with a multitude of reasons, including these:

Corruption and inflation, attacks and invasions, economic instability.

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ty, Disease and plague, few-er slaves, and a huge trade de-fi-cit led to de-va-dued cur-ren
cy. Van-dals, Vi-si-goths and Huns at-tacked the north and west, While by

ev-er high-er tax-es the peo-ple were op-pressed. De-pendence on sla-ver-y, in-ter-nal pow-er

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struggles, and civil wars, The high costs of public works, and the armies, another cause.

The Empire paid for the gladiators, and fed the unemployed.

A smaller population, and German tribes' migration, meant the
Ro-man army de-ployed Bar-bar i-an troops, but that was a big "Oops!", be-cause they
turned in-to well-trained foes. They sacked Rome in two con-flicts, then in
four se-ven-ty six, the last em-peror they did de-pose. But the
empire had split in two; while the west fell, the east grew, as the Byzantine Empire
thrived. For another thousand years, 'til the Ottomans appeared, what was
once Rome's Empire, survived.
Ancient China

Ancient Chinese Geography 7

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CONSTRAINED CREATIVITY

210

2

13

China Seas, And mountains formed, natural

Pno.

15

boundaries: The Himalayas, Ti-en Shan, and the Kun-lun chain, a

Pno.

19

western barricade; a tall mountain wall, none could invade, but also a barrier to

Pno.

23

trade.

China's northwestern

Pno.

© Aniko Debreceny 2017
Plateau of Tibet is barren and high,
Its vast deserts, Takla-makan and Gobi, with extreme temperatures, are very dry.
In the east’s the China Plain, a warm and fertile zone, with big rivers and monsoon rains, where

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most of Chi-na’s food is grown; ‘Loess’, a fine clay dust blows down from the plateau. This rich
sediment is excellent, makes grains easy to grow.

Huang He, Yellow River, with its silt and irrigation, Canals (and terrace...
far ming) fed the na tion. But "Chi na's Sor row" it was
also named, it brought mud and floods, and de struc tion. These dis asters were
part ly tamed by dikes, can nals, and levee con struc tion.
Further south the Chang Ji ang flows to the Chi na Sea, The world's third long est
ri-ver, al-so known as the Yang-zi. The Chi-nese be-lieved their coun-try was the cen-tre of the world, so They named it the "Mid-dle King-dom", Zhong-guo. Chi-na, o.
Ancient China - Three Philosophies

Aniko Debreceny

In ancient China there were three

Very different philosophies, Legalism ruled through

harsh, strict laws and fear, The laws, rewards, and punishments were very clear.

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Constrained Creativity  216

Confucius’s goals were peace, and harmony. Through

good relationships, like filial piety. Collected by his student, Meng-zi,

are the "Analects," His teachings: ethical and moral texts.

 Honour elders and tradition, practice moderation,
25 Keep your promises, and improve through education. The civil service used these ideals

in its examination, Success through merit improved the administration.

"Tao is the Way", was taught by Laozi, The symbol Yin and Yang shows balance, and harmony. Live simply, as in nature, with

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very few rules, With compassion, moderation, and humanity, the Dao's "Three Jewels".
Ancient China Dynasties 2

Aniko Debreceny

Moderato

China was ruled by a series of ruling families, called dynasties. The dynastic cycle is clear to see, At first ruled well, the regimes fell to tyranny, Corruption, high taxes,
natural disasters, led to rebellion, and new China's masters. Shang, Zhou,

Qin, and Han, Sui, Tang, Song, Yuan, Ming, Qing, history's

Great Chinese Dynasties. The

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220
"Man-date of Hea ven" said a dy-nas-ty Was ap proved to rule while there was peace, and pros-per-i-ty. But dis-as-ters meant the gods' sup-port was with-drawn, In re-bel-lion, a new dy-nas-ty would be born. The first em-per-or, Shi Huang-di, stan-dar-
discarded weights and law, Coins and writing; he built roads, and started the Great Wall.

Shang, Zhou, Qin, and Han, Sui, Tang, Song, Yu an, Ming, Qing,

(c"hing")

history Great Chinese Dynasties.

The

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Han expanded Silk Road trade and borders far and wide, The Sui built the Great Canal, the Great Wall fortified. The Tang are best remembered for gunpowder, scrolls and tea, The Song movable type and compass their legacy. The Yuan invented...
pa-per cu-rren-cies, The Ming re-built the Great Wall, sailed to far-a-way seas.

Shang, Zhou, Qin, and Han, Sui, Tang, Song, Yu-an,
("Chin")

Ming, Qing, his-to-ry's Great Chi-nese Dy-nas-ties.
("Ching")

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Ancient China Great Wall & Silk Road

Aniko Debreceny

Moderato

The Great Wall of Chi-na was built to pro-tect. Chi-

na from in-va-ding tribes, a huge pro-ject... Shu Huang-di, first em-per-or,

gave the or-ders, To build a wall, wide and tall, a-long the north-ern bor-ders.

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Dif-frent dy-nas-ties, es-pe-cial-ly the Ming, Ad-ded to the Wall from the west to near Bei-jing. Five thou-sand ki-lo-me ters long, it's im-mense, With watch tow-ers, gar-ri-son towns, and an ar-ry for de-fense.
The Silk Road, several trade routes began in the Han Dynasty. Its caravans rode over five thousand kilometers of harsh terrain, burning deserts, high mountains, and cold, wind-swept plains. To

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Europe and the world they traded luxuries, Gold, textiles, jade, jewels, silk and spice, ivory and teas. Horses, camels, slaves, and plants, medicines, and dyes, Also

knowledge, culture, and beliefs, like Budhism's rise.

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Ancient China Inventions and Discoveries

Aniko Debreceny

No-thing could be fi-ner than to

learn of an-cient Chi na's In-ven-tions and dis-co-ve-ries,

They were
great pi-o-neers, so ma-ny bril-liant i-deas, Our mo-dern world is built on these

© Aniko Debreceny 2015
Chinese inventions: gunpowder, compass, paper, printing with wood blocks.

Fireworks, silk, and porcelain, mechanical clocks.

Barrows, iron ploughs, the calendar, kites, and tea.
seismo-graph, horse collar harness, paper currency. The decimal system, ice-cream, chess, rockets, and umbrellas.

Acupuncture, rudders, steel, matches and propellors.
Stir-rups, sun-dials, lac-quer-ware, the wheel and a-ba-cus; All Chi-nese in-ven-tions,

so in-gen-i-ous! Yes, they're all Chi-nese in-ven-tions, so

fa-bu-lous!

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