



EXPLORING ARTS LEARNING IN AUSTRALIAN HOME EDUCATION:
UNDERSTANDING AND IMPROVING PRACTICE THROUGH DESIGN-
BASED RESEARCH

A Thesis submitted by

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Abstract

Facilitating a quality Arts education in alignment with the Australian Curriculum can be extremely challenging; the demands of delivering meaningful learning across five arts subjects, each with their own set of discipline-specific skills and knowledge, can be overwhelming, especially for educators who may not have background learning in one or more of these disciplines. Whilst research has been conducted regarding this issue with generalist classroom teachers, a thorough investigation is yet to be undertaken into the arts teaching practices of Australia's fastest growing educational sector: home education. In this doctoral research project, I sought to investigate the arts practices within Australia's growing home education community with the goal of supporting and enhancing quality arts engagement for home educators. To this end, I worked with a group of home educating families, investigating how they approached arts education, the challenges they faced, and the ways that existing knowledge and strengths were harnessed in delivering their children's education. These understandings were then used to develop, test, and refine an online arts learning environment and Community of Practice (CoP).

The project employed a Design-Based Research (DBR) approach, and was undertaken in four consecutive phases: an analysis of participant needs, the theoretical and practical development of a design solution to meet these needs, the iterative evaluation of this design, and finally, reflection to produce design principles: practical and theoretical guidelines that explain how quality learning occurs in this context. Data collection methods included surveys, interview data, forum posts, participant artefacts, web analytics and researcher reflections. Data were coded and analysed using inductive-thematic analysis.

The study has resulted in both practical and theoretical original research outputs. In addition to an arts website and online community for home educators, the project has led to the development of a set of design principles and a learning model for online arts learning design for home educators. Additionally, the project has generated insight and new understanding into how participating Australian home educators teach and engage in the Arts.

Certification of Thesis

This thesis is entirely the work of Katie Burke except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Principal Supervisor: A/P Margaret Baguley

Associate Supervisor: Dr David Cleaver

Student and supervisors' signatures of endorsement are held at USQ.

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Definition of terms

Authentic arts: This refers to a genuine program of arts learning that develops children’s creativity and aesthetic sensibilities, their ability to express themselves through various arts mediums, and their engagement with multiple cultures through artistic mediums. Authentic arts practices are grounded in arts knowledge and proficiency, and are considered to represent a quality arts education.

CoPs: Communities of practice are formed when people who share a common interest, craft, or profession, engage with each other for the purpose of sharing their joint interest and improving upon their practice (Wenger-Trayner & Wenger-Trayner, 2015). An important feature of the CoP is that those who hold less experience in the given area of interest learn from the expertise of more experienced members (Lave & Wenger, 1991).

DBR: Design-Based Research is an approach to educational research that is focused upon understanding and positively impacting educational practice through empirically-grounded solutions. It commences with the identification and analysis of a recognised problem in consultation with key stakeholders in a context, followed by the design, implementation and iterative refinement of a “design solution” to this problem. From this process, “design principles” - practical and theoretical guidelines that explain how quality learning occurs in this context - can be generated that inform future related learning contexts, thus improving learning design (Herrington, McKenney, Reeves, & Oliver, 2007).

Home education: Home education is the preferred term used throughout this thesis to refer to the process of education whereby parents or care-givers take primary responsibility for the education of their children from a home base, and do so independent of an institutional schooling context. Whilst this form of education has often been referred to as *home schooling*, the term ‘home education’ is preferred, as the term *home schooling* can raise connotations of “school at home”, which is not reflective of the approach taken by many home educators.

Iterative research cycles: DBR uses iterative cycles of testing and refinement of a design solution in order to understand the critical characteristics of a workable design for a specific context. “As conjectures are generated and perhaps refuted, new conjectures are developed and subjected to test. The result is an iterative design process featuring cycles of invention and revision” (Cobb, Confrey, diSessa, Lehrer & Schauble, 2003, p. 10). In this thesis, the consecutive phases of this iterative research process are called the Alpha, Beta and Gamma research cycles.

NAPLAN: Australia’s “National Assessment Program - Literacy and Numeracy” is a nation-wide test, conducted annually with children in years 3, 5, 7, and 9 in the areas of reading, writing, language conventions, and numeracy.

The Arts: In the context of this thesis, “The Arts” refer to learning in the five art forms specified in the *Australian Curriculum: The Arts*. These are Dance, Drama, Media Art, Music and Visual Art (Australian Curriculum Assessment and Reporting Authority, 2017).

Publications arising from this research

Book chapter

Burke, K. (2016). Investigating creative arts practices in Australian home education through Design-Based Research: Entering the research maze with the spirit of adventure. In D. Rossi, F. Gacenga, & P. A. Danaher (Eds.), *Navigating the education research maze: Contextual, conceptual, methodological and transformational challenges and opportunities for researcher* (pp. 115-130). Cham, Switzerland: Springer.

Journal article

Burke, K. (2016). Home is where the art is: Using design-based research to support arts engagement in Australian home education. *Australian Art Education*, 37(2), 133-150.

Refereed conference paper

Burke, K. (2016). *Rising to the challenge: Supporting educators without Art experience in the delivery of authentic Arts learning*. Paper presented at the Australian Association for Research in Education, Melbourne, Victoria.

CHAPTER 1

Introduction

This thesis reports on a Design-Based Research (DBR) project in which I have investigated arts practices within Australia's growing home education community with the goal of both supporting and enhancing the quality of arts engagement for home educators. Throughout the project, I have sought to understand how home educators approach arts learning, the challenges they face, and ultimately, how online learning environments for creative arts engagement can be designed to meet their specific needs. This was achieved by working collaboratively with a sample of home educators to identify specific experiences, needs, and strengths regarding their teaching practices in the Arts, which then underpinned the design of an online support resource: a creative arts website and online community: homeiswheretheartis.com.au.

Homeiswheretheartis.com.au was iteratively trialled and refined in collaboration with home educating participants in order to ensure that its design met their needs in facilitating a quality arts education in their respective contexts. The project resulted in original practical and theoretical research contributions; in addition to the development of a functioning website and online community which now operate beyond the life of the research, the major theoretical output resulting from the iterative design, testing and refinement of homeiswheretheartis.com.au is a set of design principles for the design of online arts learning environments for home educators. These represent practical and theoretical guidelines that explain how quality learning occurs in this context, which can then be used to underpin future learning design in related contexts.

1.1 Background and significance

The impetus for this research began with personal experience: for a period of eight years (2005-2012), I home educated my two children. During this time I was also employed as a tertiary arts educator teaching pre-service teachers how to effectively engage students with the Arts. Although I possessed significant background knowledge in arts education, I ironically found that facilitating arts learning for my

children was the most difficult aspect of their formal learning. The difference in their ages and their diverse interests raised pedagogical challenges. Time, and resources for teaching in the Arts were both limited, and, when coupled with the demands of facilitating learning across all teaching areas, I often experienced a sense of ineffectiveness. My personal and professional convictions regarding the value of the Arts in a quality, holistic education prompted deep consideration of the nature of arts learning in my own educational practice with my children, and raised questions regarding the nature of arts learning in other home education contexts. An extensive search for existing research in this field proved unfruitful, identifying a gap in the literature regarding the nature of arts learning in home education. This prompted my Master's degree research in which I explored how a sample of home educators engaged with the Arts. It was during this research that many of the participants expressed a desire for greater support in facilitating arts education with their children, an insight which prompted a desire to conduct further research with home educators that might contribute beneficially to this perceived need.

Beyond a personal conviction regarding the value of conducting research into the arts practices of Australian home educators, my engagement with research literature across both the Arts and home education highlighted the significance of this research focus. The value of the Arts, and their positive impact on learning and the development of fundamental skills such as critical and creative thinking, innovation, and personal and cultural understanding, have been extensively explored in studies and reports throughout the world (Bamford, 2006; Ewing, 2010; Fiske, 1999; Hetland & Winner, 2001; Hughes, 1989; Hutter, 2008; Seidel, Tishman, Winner, Hetland, & Palmer, 2009; United Nations Educational Scientific and Cultural Organisation (UNESCO), 2006). However, the majority of existing research regarding arts education focuses upon school contexts, and current research has not satisfactorily encompassed insights into the growing home education phenomenon.

Home education, also known as home schooling, was once the domain of “hippies” and “religious fanatics” (Morton, 2010) but is now gaining mainstream global momentum, and many parents see it as a legitimate educational option for the education of their children (Neuman & Guterman, 2016a; Ray, 2013b, 2016; Roy, 2016). With an increase in the numbers of children being home educated, research in

the field has likewise grown, although Jackson (2017, p. 2) reveals that Australian research has only a “small but growing presence”. The research that has been conducted to date in Australia has focused on wider issues including academic achievement (Board of Studies Teaching and Educational Standards NSW (BOSTES), 2014; Lubienski, Puckett, & Brewer, 2013; Neuman & Guterman, 2016a; Ray, 2013a); parental reasons for home educating (Barratt-Peacock, 1997; Chapman & O'Donoghue, 2000; Croft, 2013; English, 2015b; Queensland Government, 2003); social development (Barratt-Peacock, 1997; Chapman & O'Donoghue, 2000; Jackson, 2009; Krivanek, 1988; Simich, 1998); pedagogical approaches (Barratt-Peacock, 1997; Neuman & Guterman, 2016c; Rothermel, 2011); demographics (Board of Studies Teaching and Educational Standards NSW (BOSTES), 2014; National Council of Home Educators New Zealand, 2013; Queensland Government, 2003; Rothermel, 2003; Sparks, Harding, McNeice, & Osmark, 2003); student perceptions of their experience (Broadhurst, 1999; Jackson, 2009); special needs in home education (Jackson, 2009; Parsons & Lewis, 2010; Stroobant, 2006); and legislative issues (Allan & Jackson, 2010; Drabsch, 2013; Jackson & Allan, 2010; Queensland Government, 2003). There is thus a noticeable gap in the research both in Australia and abroad regarding the dynamics of arts learning in home education contexts. Further, given the value of the arts to every child's education, research into arts education that represents the interests and dynamics of this growing educational sector is warranted.

Beyond this, investigating the arts practices of home educators is considered significant in light of the recent move to a national curriculum in Australia. A variety of mandates are being placed upon home educators in some states to show alignment to the key learning areas, which importantly include the Arts (Department of Education and Training Victoria, 2015; Department of Education Western Australia, 2016; Office of the Board of Studies New South Wales, 2016; The Government of South Australia, 2017). The five art subjects covered by the Australian Curriculum - Dance, Drama, Media Arts, Music, and Visual Art - each possess their own set of discipline-specific concepts and skills, and research with generalist classroom teachers shows that many feel ill-prepared to teach into such an extensive field, where a lack of formal training in some or all of these five arts subjects has formed a significant hindrance to their sense of confidence and competence in delivering a quality arts

education (Alter, Hays, & O'Hara, 2009a; Donnelly & Wiltshire, 2014). Given that home educating parents are required to hold neither teaching nor subject-specific qualifications, questions emerge regarding whether a similar dynamic exists for home educators, and whether this might be impacting on the quality of arts learning in home education contexts. The research conducted through this project contributes to our understanding and helps to form a more complete picture of how home educators approach arts learning. Moreover, the project, as an applied form of research, aims to provide specific support, based upon these understandings that should promote authentic arts practices.

1.2 Collaboration with home educators

DBR is a research approach that aims to improve educational practice, and a key feature in achieving this aim is for researchers to work in collaboration with practitioners. Herrington et al. (2007) assert that collaborative research with practitioners who possess an intimate understanding of their learning context and problems within it enables the creation of crafted solutions that value the rich insights of those for whom the design will be generated (Herrington et al., 2007). My immersion in the research context as a member of the home education community, has therefore proved an important feature of my approach to this research, permitting an emic perspective (Fetterman, 2005), whereby my 'insider status' has assisted me to understand the complexities and intricacies of the home education context, and situated understandings of the experience of some home educators. In addition to personal interactions with other families in the community, I engaged in formal and informal interactions with 192 home educators, both interpersonally or via an online survey, which revealed important insights into their experiences regarding facilitating their children's arts learning: of challenges they faced, of areas of perceived competency, and expressed needs they identified could contribute to a more satisfactory arts education for their children (see Appendix A for a summary).

The "salient issues and suggestions" (Parker, 2015, p. 3) raised through these interactions with home educators highlighted a number of common challenges that were experienced with respect to facilitating arts learning:

- *Insufficient background knowledge or confidence in the Arts:* Strong correlations were noted between a parent’s confidence regarding their children’s arts education and their personal background learning in the arts. Insufficient background knowledge in some or all of the arts subjects significantly contributed to a lack of confidence and sense of competence in delivering arts learning in that domain.
- *Resourcing arts learning:* Many home educating parents acknowledged that they sought, but did not necessarily have success in accessing, quality resources for arts learning, which included pre-purchased curricula and learning guides, materials and tools with which to engage in the Arts, and opportunities for arts engagement in the community such as events, performances, and private lessons. This subsequently impacted their perception of the quality of arts learning they could facilitate.
- *Time constraints:* The Arts were frequently identified as time-intensive, and challenging to fit into busy schedules. Furthermore, the Arts were often the last priority in a long line of competing needs. Numerous families acknowledged that other subjects often took precedence when time was “tight”, even for those who highly valued the Arts.
- *The scope of the Arts:* The breadth of necessary skills and knowledge to adequately teach all five arts subjects in the Australian Curriculum left many home educators feeling overwhelmed by the scope of learning to be covered in an already-busy curriculum. For some, this challenge led to a compromise: focussing on the art subjects with which they felt comfortable and omitting those that were too challenging from formal learning. Some families reported feeling stressed trying to cover all five arts subjects. Others outsourced where possible those arts subjects they felt unable to cover.
- *Catering to individual student needs:* Responding effectively to the varied needs of individuals was challenging for many families. Issues such as gender, age, personal interests, and special needs were mentioned by various families as aspects that made the delivery of arts learning more challenging. Most notably, the multi-age nature of most home educating contexts meant that parents often struggled to find engaging, relevant and appropriate arts learning for a variety of age-levels.

Notably, in addition to these challenges, many home educators expressed satisfaction with certain aspects of their arts learning. Whilst the sharing of these positive strengths and experiences could empower the home educating community, provision for this sharing on a nation-wide and accessible platform was not yet occurring. As such, I determined that an *online* support resource represented the most useful approach for this research and development process. An online platform permitted families throughout Australia the opportunity to engage in the research, which would culminate in the creation and refinement of a resource that would be widely accessible, regardless of location.

These understandings gave rich, grounded insights into the nature of arts learning in home education, of challenges that sometimes impeded the quality of arts learning, and of potential strategies that might facilitate the empowerment of the community through the sharing of existing strengths. Such insights formed an important foundation for the research project.

1.3 Research aims

The overarching research question underpinning this study sought to understand:

How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?

This overarching research question was guided by a number of sub-questions:

1. How do Australian home educators facilitate and deliver arts education for their children?
2. What design principles are suitable for the design of online arts learning environments for Australian home educators?
3. How is the project's online learning environment effective for home educators in facilitating a quality arts education?

The project was planned and conducted using Design-Based Research. DBR is an applied research approach that seeks to understand and positively impact practice in specific contexts through empirically-grounded solutions. It is considered particularly suitable for investigating technological innovations in educational contexts (Reeves,

McKenney, & Herrington, 2011), and was thus deemed appropriate for this project, in which I was focusing on developing an online environment to support and enhance arts education practices in Australian home education contexts. The research approach was structured according to the four phases of DBR as described by Reeves (2006), and each phase is briefly described below. A detailed overview of Reeves’ four phases of DBR, and how this was applied in this study is explored in Chapter 3: Methodology.

1.3.1 Phase One – Needs Analysis - Analysis of the problem in context



Phase One of the research process involved consolidating my understanding of the problem in context. This included formal and informal consultation with home educators, including an internet survey with 192 home educators (see Appendix A and B), an extensive review of relevant literature, and the development of a methodological approach to the overall research project. Understandings arising from this process formed the important foundation for the successive phases of the research.

1.3.2 Phase Two - Formative evaluation: Development of a design solution



In Phase Two, I focused on developing a design solution in response to my understanding of the problem in context. In response to the second research sub-question, the process began with the development of draft design principles: a draft set of guidelines that arose from a synthesis of understandings derived through the literature review and my Phase One collaboration with home educators. I created a prototype design solution in the form of a creative arts website through which an online community would also operate: homeiswheretheartis.com.au. This was then

refined in response to feedback from experts in arts education, home education and online learning.

1.3.3 Phase Three – Effectiveness evaluation: Iterative testing and refinement of the design solution



Homeiswheretheartis.com.au was tested in three iterative cycles, called the Alpha, Beta and Gamma cycles, over the course of a school year with approximately 80 home educating families. Following completion of each cycle, data were collected and analysed in order to develop ongoing understandings of research questions 1 and 3. Findings were then used to refine the learning environment, in addition to developing ongoing understandings about the nature of arts learning in home education environments.

1.3.4 Phase Four – Reflection to produce design principles



In the final phase of the research, I focused on synthesising the project findings throughout all phases of the project in order to develop a final set of design principles that answered the project's over-riding research question: *How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?* The final iteration of homeiswheretheartis.com.au was also opened to the wider home education community as a free resource.

1.4 Outline of thesis

In this chapter, I have presented a summary of the research context, established the significance of the project, and outlined the research approach. Following this

introductory chapter, I provide an exploration of the literature that forms an important theoretical foundation for this research project in Chapter 2.

In Chapter 3, I discuss and justify the selected research methodology. I provide a detailed justification for a qualitative methodology, and discuss a more detailed overview of each phase of the Design-Based Research process, demonstrating how DBR enabled the fulfilment of the practical and theoretical research intentions.

The remainder of the thesis then presents a detailed explanation and justification of Phases Two, Three and Four of the research process. In working closely with practitioners in context, DBR is highly emergent, and each phase of the research process is grounded in findings from the previous phase (Cobb, Confrey, Lehrer, & Schauble, 2003). Therefore, the approach taken in this thesis is to provide a recount and justification of each phase of the project, demonstrating how emergent findings in each phase and sub-phase cycles have contributed valuable understandings that directed the course of successive phases.

In Chapter 4, I demonstrate how I adapted ideas and guidelines from existing studies that have utilised design principles and heuristics and then synthesised and adapted them to the contextual problems I had uncovered. Through this process, I developed a set of draft design principles which were then used to guide the development of the project's design solution: the online arts learning environment homeiswheretheartis.com.au. In Chapter 5, the development of the prototype learning environment is detailed and justified, demonstrating how the draft design principles were translated into practical aspects of the learning design.

Chapters 6, 7 and 8 then explore the findings from the three successive iterations of homeiswheretheartis.com.au: the Alpha, Beta and Gamma cycles. The findings from each phase helped to identify how the online learning environment was being used by participants, aspects that participants found helpful or unhelpful to the facilitation of their children's arts learning, and new understandings into the nature of arts learning in different home education contexts. These multifaceted findings were then used to modify the website at the conclusion of each iteration.

In the final chapter: Chapter 9, I present the conclusions of the project and my original contribution to knowledge: a set of design principles for the structuring of online arts learning for home education contexts. Implications and limitations of the study are presented, and recommendations for future research are discussed.

CHAPTER 2

Literature review



The following literature review provides the theoretical foundation for this Design-Based Research (DBR) project into arts learning in Australian home education. In the context of this project, home education is understood as a process of education whereby parents or care-givers take primary responsibility for the education of their children from a home base, and do so independent of an institutional schooling context (Barratt-Peacock, 2003; Harding & Farrell, 2003). It is therefore appreciated as distinct from other forms of at-home learning, including distance education and online learning. In order to gain insight into how Australian home educators facilitate arts learning, it is necessary to understand home education as a unique pedagogical practice that differs from institutional learning, and a practice that is most appropriately understood when viewed as a form of sociocultural practice (Jackson, 2015). These and other foundational issues in home education are explored, and a discussion of arts practices through a sociocultural lens then follows, providing insight into what might constitute “quality” within arts teaching and learning practices, with questions raised regarding the implications this has for home educators, and for the design of learning experiences and resources for this diverse community. The chapter concludes with a brief exploration of literature pertaining to online learning environments as a foundation for the development of the project’s online learning design.

2.1 An overview of home education

Once frowned upon as an extremist or eccentric educational option, home education is increasingly gaining broad acceptance and global momentum as a legitimate educational choice (Neuman & Guterman, 2016a; Ray, 2013b; Roy, 2016). Owing to the large number of parents/carers who do not register with any educational body,

accurate statistics of home educating families are difficult to obtain. In Australia, registrations rose by 40% between 2012 – 2014 (Smith, 2014), and estimations regarding the number of unregistered families have recently ranged from 50% to 85%, indicating that the true numbers that include all home educating families are much greater than the recorded figures (Sinnerton, 2014). Regardless of definitive statistics, home education is clearly “growing in legitimacy and popularity in line with other forms of private education in Australia” (English, 2015a, p. 4), mirroring a global phenomenon (Kunzman & Gaither, 2013; The Economist, 2012; Watts, 2014).

The home education research agenda has evolved markedly in response to this sector’s rapid growth, leading to research into many facets of the practice, albeit largely representative of North American families, where the majority of the research has been conducted. By comparison, research into Australian home education is limited, although growing (Jackson, 2017). Australian research in this area has explored issues such as parental reasons for choosing to home educate (Allan & Jackson, 2010; Barratt-Peacock, 1997; Queensland Government, 2003); social development (Barratt-Peacock, 1997; Jackson, 2009; Krivanek, 1988); educational approaches (Barratt-Peacock, 1997; Neuman & Guterman, 2016c; Rothermel, 2011); demographics (Board of Studies Teaching and Educational Standards NSW (BOSTES), 2014; Queensland Government, 2003; Rothermel, 2003; Sparks et al., 2003); student perceptions of their experience (Broadhurst, 1999; Jackson, 2009); students with specific needs (Jackson, 2009; Parsons & Lewis, 2010); and legislative issues (Allan & Jackson, 2010; Monk, 2009). To date, very little research has been conducted into academic achievement, although the issue is discussed briefly in a number of studies which have explored parent and student perceptions of being involved in home education (Harding, 2006, 2011; Jackson, 2007; McColl, 2005). A number of these issues will now be briefly explored in order to provide an overview of key issues in the home education sector.

2.1.1 Motivations for choosing to home educate

The reasons behind Australian parents’/carers’ choices to home educate are based predominantly upon decisions relating to positive and negative freedoms (Croft, 2013). Positive freedoms or *freedom to* decisions include the freedom to provide individualised learning, improved learning outcomes through one-to-one learning,

family closeness, and the opportunity to explore a broad curriculum that includes holistic “real world” and flexible learning that meets the individual needs of each child (Barratt-Peacock, 1997; Croft, 2013; English, 2015b). Negative freedoms, or *freedom from* decisions include a family’s decision to give their children freedom from perceived negatives of the schooling system, including bullying and related social issues that are believed to contribute to low self-esteem, large class sizes, a “one size fits all” curriculum that does not respect or cater to individual needs and can contribute to low educational outcomes, and philosophical differences that do not support the family’s value system (Barratt-Peacock, 1997, 2003; Brown, 2014; Chapman & O’Donoghue, 2000; Croft, 2013; Harding, 2011; Jackson & Allan, 2010; Queensland Government, 2003). Other influencing factors behind the decision to home educate include geographical isolation and special education or health needs (Barratt-Peacock, 1997, 2003; Harding, 2011).

Whilst the variety of reasons for home educating have been acknowledged as well-intentioned, home education critics raise concerns regarding the individualised and privatised focus of the movement (Apple, 2015; Lubienski, 2003). It has been questioned whether home education represents a form of “retreatism” (Spiegler, 2015) which may potentially lead to an amplification of social inequality (Apple, 2000), or the perpetuation of anti-social indoctrination that conflicts with the values of wider society (Lubienski, 2003). Fears also exist that home education does not provide children with adequate external checks and supervision to minimise child neglect or abuse (Lubienski, 2003; Rothermel, 2015). Clear tensions are apparent between a parent’s right to choose the education they deem most appropriate for their children, and a government’s responsibility to ensure its citizens have access to education in a safe environment which prepares them to fit into, and contribute to, society (Jackson & Allan, 2010; Monk, 2015; Rothermel, 2015).

2.1.2 Home education regulation

Home education is a legal option in Australia, provided parents/carers register their children with their state or territory’s relevant education body (Townsend, 2012). Requirements for registration are considerably varied. Expectations range from restrictive and burdensome registration requirements for parents/carers to align home studies with the state or Australian Curriculum (Donnelly, 2017), to those that are less

defined, more “facilitative and enabling” (Jackson & Allan, 2010, p. 361), allowing parents/carers the right to choose the approach they deem most appropriate for their family (see Tasmanian Home Education Advisory Council, 2017). It has been noted that the rise in the number of home educating families in Australia has led to “an equal and opposite reaction, generally towards greater government involvement” (Rowntree, 2012, p. 74), and more restrictive and burdensome registration requirements (Donnelly, 2017; Jackson & Allan, 2010). The 2014 parliamentary inquiry into home education in New South Wales, and Tasmania’s 2016 Draft Education bill are both examples of the recent increases in government scrutiny and moves to increase regulation on Australian home educators.

Researchers have found that some home educating families hold a sentiment of mistrust towards institutional authority figures, and claim that educating children is the constitutional right of the family, not of the State (Barratt-Peacock, 1997; Chapman & O'Donoghue, 2000; Jackson & Allan, 2010). Based upon this belief, some families have always chosen not to register as home educators, however it is suggested that the increasingly tight regulations contribute further to a rise in the number of unregistered families (Townsend, 2012). Such issues contribute to the controversy surrounding home education and the extent to which the State should have authority over parental decision making (Apple, 2015; Galloway, 2003; Monk, 2015). I align with Allan and Jackson, who argue that “some regulation is acceptable”, and believe that this can provide an important level of accountability for home educating parents for the well-being of their children, however also agree that “once the state chooses to regulate home education the focus must be upon the child, recognising and facilitating successful educational and social outcomes from an informed position” (Allan & Jackson, 2010, p. 66). It is felt by some that increasingly restrictive regulations are not facilitating this (Donnelly, 2017), and these restrictions do not demonstrate an understanding that home education practices differ in approach from traditional classroom learning. These insights have relevance for this study in terms of understanding the variety of positions participants may hold toward expectations in some states for home educators to align with the Australian Curriculum, and of their decision-making regarding educational approaches they deem best for their children.

2.1.3 Pedagogical approaches

Beck (2015) notes that a family's primary reason for home educating will have implications for the educational approach they choose, and the wide variety of motivations for home education is reflected in the broad diversity of pedagogical approaches adopted by individual families (Barratt-Peacock, 2003; Croft, 2013; Morton, 2010; Reindl, 2005; Taylor-Hough, 2010). In seeking to understand how home educators approach pedagogy, numerous classification models have been generated, which tend to group pedagogical approaches along a continuum, with structured learning at one extreme, and unschooling at the other. These have variously been described as:

- formal, eclectic and informal (Barratt-Peacock, 1997; Croft, 2013);
- more formal, less formal and informal (Thomas, 1998); and
- structured, semi-structured and no-structure (Patrick, 1999).

Parents/carers who choose a more formal or structured approach follow what might be considered to be a more conventional approach to curriculum and learning, sometimes resembling “school at home” (English, 2012; Taylor-Hough, 2010). Such families tend to access commercially available pre-prepared curriculum to cover basic skills, and often mix and match these with wider supplemental activities in other curriculum areas (Harding, 2011). With the increase in home educating numbers around the world, a significant variety of home education resources have been made available for purchase. These purchased materials are often based on prescriptive, didactic approaches to learning; however parents/carers tend to adapt such resources to their children's interests and needs (English, 2012). Such resources frequently cater to specific demographics, such as religious-based instructional materials, permitting families to purchase materials that fit their philosophical and pedagogical approach (English, 2012; Harding, 2011).

At the other extreme are families who reject a curriculum-centred approach to learning and who prefer a Natural Learning, “unschooling”, or holistic approach. These learner-centred approaches follow from the work of American author and educator, John Holt, whose early work promoted a belief in children as capable and curious; who – if provided with a conducive environment – will naturally instigate their own

authentic inquiry-based learning. Holt states, “give children as much help and guidance as they ask for; listen respectfully when they feel like talking; and then get out of the way. We can trust them to do the rest” (Holt, 1967, p. 189). Such an approach does not mean that unschooling or natural learning parents have no role in their child’s education. Instead, the parent’s role is that of a guide and mentor who supports and facilitates the child’s interests.

The descriptions of the two “extremes” of home education approaches have unintentionally contributed to a polarised view of home education, rather than a nuanced understanding of the diversity of practices adopted by individual families who predominantly fit somewhere between these extremes (Barratt-Peacock, 1997; Croft, 2013; English, 2012; Morton, 2010; Rothermel, 2003; Taylor-Hough, 2010). Additionally, most families tend to become less structured the longer they home educate, based upon their growing confidence and experience (Barratt-Peacock, 1997; Croft, 2013; Jackson, 2009). In response to efforts to categorise such a diverse practice, Rothermel (2003) suggests an alternative approach by characterising home educators according to strata, “first as a superficially homogenous group, secondly as diverse groups, thirdly as families and fourthly as individuals” (p. 74). Such an approach moves beyond stereotypes and oversimplification, and assists this research to form understandings that may exist outside of classification models by acknowledging that similarities exist on broader levels, and that individual contexts then generate points of uniqueness.

2.1.4 Social development

Social development is often an area of concern for many critics or outsiders regarding home education. Such fears are regularly made evident to home educators, who acknowledge that the most common query they seem to encounter regarding their choice to educate their own children is, “What about socialisation?” (Drabsch, 2013; Rowntree, 2012). A widely held supposition is that home educated children lack social development, fail to mature into confident and balanced individuals, and are deprived of opportunities to inculcate societal norms and expectations (Kunzman & Gaither, 2013; Queensland Government, 2003), and these concerns mirror those of home education critics who assert that isolating children from society at large denies them

healthy socialisation (Beck, 2015). However, whilst such criticisms exist, both Australian and global research shows that home educated children are exposed to wide, healthy social interactions (Barratt-Peacock, 1997; Jackson, 2009; Krivanek, 1988; Kunzman & Gaither, 2013; Monk, 2004). Home educators maintain that they have access to ample interactive opportunities through learning cooperatives, home school groups, and a flexible timetable that opens up greater possibilities to attend extra-curricular activities (Jeffrey & Giskes, 2004; Kunzman & Gaither, 2013). Children are equally considered to be spared the negative social influences of school settings, such as bullying, and peer pressure (Barratt-Peacock, 1997; Drabsch, 2013; Jeffrey & Giskes, 2004).

A small number of studies, however, note that home educated students occasionally express a sense of social isolation, or demonstrate a lesser degree of peer-orientation than institutionally educated children (Delahooke, 1986; Jackson, 2009; McColl, 2005; Seo, 2009). Jackson's research with Australian families reveals a small number of situations where student participants revealed they missed socialising with larger numbers of peers of the same age; although equally notes that this was not considered to be a serious problem by those students, who felt it was only a minor inconvenience. Home education critics (Apple, 2000, 2015; Lubienski, 2003; Lubienski et al., 2013) have focused upon the potential for isolation, "cocooning" (Apple, 2000), and potential ideological indoctrination in the home education context. However, much of Apple's focus is upon America's religious right, and does not necessarily represent a broader view of the wider home educating population. Barratt-Peacock's extensive research with hundreds of Australian home educating families presents an alternative perspective to such critical views, showing that – rather than being in conflict with the goals of society - home educators are grounded in their wider community, effectively returning to educational roots that pre-date institutional education (1997, 2003). Similarly, Beck (2015) asserts that social environments for home educators do not necessarily equate to a divergence from the values and interests of larger society. Thus, whilst research demonstrates a small number of concerns exist regarding the socialisation of home educated children, the vast majority of research indicates positive social outcomes (Kunzman & Gaither, 2013). Such understandings are useful for this study. They demonstrate that many home educating families do not conduct

their children's education in isolation, and that collaborative learning is a potential pedagogical strategy that may be employed as part of the project.

2.1.5 Academic achievement

The academic achievement of home educated children in Australia has not been researched in any nation-wide studies, however, smaller studies have identified that home educated children academically out-perform students from formal education contexts (Harding, 2006, 2011; Jackson, 2007; McColl, 2005). In 2014, the New South Wales state-wide analysis of NAPLAN data identified that home educated students, "scored significantly above the overall NSW average in nearly every test" (Board of Studies Teaching and Educational Standards NSW (BOSTES), 2014, p. 1), and further, that formerly home educated students who had entered into the school system performed significantly higher in tests on reading, grammar and punctuation. Whilst shortcomings of existing research include the lack of quantitative studies and the self-selection of participants (BOSTES, 2014), the consistency of findings across studies affirms that home educated children are attaining satisfactory academic outcomes. More extensive research has been conducted in other countries, and again tends to highlight that home-schooled children attain higher academic results than schooled peers (Galloway, 2003; Martin-Chang, Gould, & Meuse, 2011; Meighan, 1995; Ray, 2010, 2013a). Noted home schooling critic, Christopher Lubienski (2003) asserts that higher academic achievement is incorrectly attributed to home schooling, based on the false assumption that correlation implies cause:

[A]lthough there may be a correlation between the act of home schooling and higher academic outcomes, researchers, and advocates have yet to demonstrate a causal relationship between these two factors. (Lubienski et al., 2013, p. 383)

It is suggested by Lubienski et al., that socio-economic status, the active involvement of parents with financial flexibility, and higher levels of parental education are more likely contributing factors to higher educational outcomes in home educated students. This, however, is not supported by Rothermel's (2002) research into the types of families choosing to home educate. Interestingly, 27% of her participants did not hold post-secondary qualifications, and 51% of participants possessed no tertiary qualifications; and yet children in the study were found to academically perform at, or

higher than, children who were institutionally educated. Rothermel thus concluded that parental levels of education and socioeconomic status did not play a pivotal role in student academic attainment. Similarly, Australian research confirms that home educators are comprised of a vastly varied range of demographic characteristics, including varied educational background and socio-economic status, and that such factors appear to have little bearing upon the success of education (Harding, 1997; Jackson & Allan, 2010; Office of the Board of Studies New South Wales, 2004; Queensland Government, 2003). Hence, whilst there remains contention as to why the educational attainment of home educated students is equal or above that of the wider student population and whether this can be solely attributed to home education, there is nevertheless consensus that these students are attaining at or above satisfactory educational outcomes.

Research by Martin-Chang et al. (2011) suggests different pedagogical approaches yields different academic outcomes, asserting that families who adopt more structured approaches to pedagogy attain higher standardised test scores than institutionally educated students. Equally, they note that families choosing more unstructured home schooling (also known as “unschooling” or natural learning) attained lower test scores. However, Neuman and Guterman (2016b) counter that such comparisons are misguided; that methods of evaluation and comparison are based upon traditional, institutionally-oriented conceptions of teaching that privilege structured approaches to teaching and learning. They state, “In subjects included in standardized achievement tests, children in the unstructured, unschooling approach will have difficulty producing a level of academic achievement similar to that of peers in school for the simple reason that they do not learn according to a systematic curriculum and therefore have not been exposed to some of the specific knowledge acquired by their peers in school” (p. 5). Thus, whilst affirming that the majority of research demonstrates higher academic outcomes for home educated children than schooled peers, Neuman and Guterman (2016a) propose that academic attainment can only be understood when measured against educational goals and pedagogical approaches in individual contexts.

2.1.6 Home education as a form of sociocultural practice

A significant finding across home education research has been the identification of its pedagogical distinctiveness from institutional learning. The sociocultural context characterising home education is markedly different to traditional institutionalized schooling, and has been identified as presenting strong correlations with Vygotskian theory (Jackson, 2015). A number of researchers thus recommend that home education needs to be interpreted through a sociocultural lens if it is to be well understood (Barratt-Peacock, 1997; Jackson, 2015, 2016; Thomas, 1998).

Sociocultural views of learning are based predominantly upon the works of Vygotsky, who asserts that learning is best understood when focus is given not to the product or outcomes of learning, but the *process* by which learning occurs (Daniels, 2008). Vygotsky (2012/1962) rejects the notion of human learning as an individualised, decontextualised activity. Rather, he contends learners are socially and culturally situated, and their learning is mediated by their social and cultural context. Vygotsky's work has been extended upon by others, including Lave & Wenger (1991, 1998, 2005), who reconceive learning as social and personal transformation which occurs in Communities of Practice (CoP). Lave and Wenger assert that learning is not the acquisition of knowledge, but is the process of a learner's engagement with a CoP through which learning occurs as a feature of membership in that community. As such, sociocultural approaches to education require authentic learning experiences in real world, social settings; features of home education that are readily available when living and learning are conducted simultaneously.

Home education reflects the underpinning principles found in sociocultural theory (Barratt-Peacock, 1997, 2003; Harding, 2011; Jackson, 2015; Neuman & Guterman, 2016b; Thomas, 1998). The kind of learning facilitated in home education contexts has been identified as a process of *enculturation*: the acquiring of fundamental cultural understandings naturally through everyday social interaction (Thomas, 1998); and of *situated learning located in social practice* (Barratt-Peacock, 1997, 2003). Children are further described as *cognitive apprentices in the family's Community of Practice* wherein parents/carers act as guides to the wider field of authentic adult practice through family conversation, role modelling, domestic occupation and engagement with the wider world (Barratt-Peacock, 1997, 2003). Learning is related to the whole

person as intimately understood in the family, with the wider sphere of everyday interactions coming to bear upon the focussed interaction regarding “school work” and with the end goal of developing the whole person. As such, the home education environment has been found to fulfil the description of a CoP (Barratt-Peacock, 1997). Further, as a CoP, home education enriches the family, and is not limited to the children’s learning. This is confirmed by Barratt-Peacock’s (1997) findings in which parents often express that the process of home education contributes to their own learning. Similarly, Neuman and Aviram’s (2003) research identifies that home education represents a fundamental change in lifestyle for *all* family members. As such, in CoPs, both learner and community are transformed. Such intimate, connected and holistic approaches differ significantly from institutionalised learning, which cannot provide the same level of continuity between the many private contexts of students and “school learning” (Jackson, 2009).

Understanding home education as pedagogically unique and as a form of sociocultural practice is an important foundation for this research project. It foregrounds individual context as a fundamental element of each family’s approach to learning, and permits an appreciation of the variety of ways in which parents/carers may facilitate learning for the unique needs of their children within their family dynamics. It avoids grouping home educators according to stereotypes; instead providing a framework to appreciate, understand – and importantly in the context of learning design – support learning within such a disparate community. A more in-depth unpacking of sociocultural theory and its critical impact on home education contexts is explored in Chapter 4, wherein the project’s theoretical framework is explored and applied in the development of the project’s draft design principles.

2.2 Arts learning as a form of sociocultural practice

Given that sociocultural theory provides a relevant lens to explore home education, it follows that arts practices within home education in the context of this project might be best understood when approached as sociocultural practice. Importantly, sociocultural approaches to learning are recommended as an ideal means of engaging with the Arts (Bamford, 2006; Cornett, 2011; Ewing, 2010), and therefore exploring arts learning from a sociocultural perspective not only aligns with processes within home education, but also with recommended pedagogical practice.

Within sociocultural theory, the Arts are viewed as constructions that emerge from, and reflect, the collective beliefs of society (Emery, 1999, as cited in Bamford, 2006). The Arts represent vital vehicles of communication, and connect individuals, communities and cultures (UNESCO, 2006). The value of the arts to education and their significance as a form of sociocultural expression and in forming a sense of belonging is summarised in the UNESCO Road Map for Arts Education:

The arts are both the manifestation of culture as well as the means of communication of cultural knowledge ... The diversity of cultures and their creative, artistic products represent contemporary and traditional forms of human creativity which uniquely contribute to the nobility, heritage, beauty and integrity of human civilizations.

Awareness and knowledge of cultural practices and art forms strengthens personal and collective identities and values, and contributes to safeguarding and promoting cultural diversity. Arts Education both fosters cultural awareness and promotes cultural practices, and is the means by which knowledge and appreciation of the arts and culture are transmitted from one generation to the next. (2006, p. 6)

An approach to arts learning that values it as a form of sociocultural practice provides opportunities to engage with, enact and interpret artistic explorations of human experience. Further, collaborations are valued, permitting those engaged to learn from each other, critically reflecting upon their learning and making connections between their arts engagement and their wider world of experience (Bamford, 2006; Holland & O'Connor, 2004). The development of the *Australian Curriculum: The Arts* is evidently informed by elements of sociocultural theory, with significant emphasis given to value of The Arts as vehicles of communication through which students come to know and express their understanding of their world, including developing an appreciation of diverse histories, cultures and languages. The writers state:

Rich in tradition, the arts play a major role in the development and expression of cultures and communities, locally, nationally and globally. Students communicate ideas in current, traditional and emerging forms and use arts

knowledge and understanding to make sense of their world. (ACARA, 2017, para 5)

The curriculum foregrounds the value of collaborative, authentic and embodied arts experiences where students engage in making and responding to the artworks of others. These experiences are coupled with a focus on developing an understanding of foundational arts knowledges, skills, techniques, processes, materials and technologies in each of the arts subjects through which students can communicate their understanding, feelings, or intentions, and similarly understand the artworks of others (ACARA, 2017; Barton & Baguley, 2014).

Such an understanding of arts learning as sociocultural practice underpins this research project. Whilst adherence to the Australian Curriculum is not a primary consideration for many home educators (Croft, 2013; Rowntree, 2012), it has clear value for this project in the development of a learning design based upon sociocultural approaches to arts learning. Further, the earlier identification that some home educators desire to maintain alignment with the Australian Curriculum (see section 2.1.2), highlights the significance of the *Australian Curriculum: The Arts* as providing a significant variable in the development of a learning design.

Given this project's focus upon supporting *quality* arts engagement in Australian home education, a sociocultural approach is further used to clarify the concept of *quality* in arts practices in an “evocative, rather than didactic” spirit (Dahlberg, Moss & Pence, 1999, p. 2). A small number of research projects concerned with “quality arts learning” or “best practice” have tended to focus beyond the nature of the arts themselves, instead focusing upon the outcomes of arts engagement – namely how arts learning positively impacts upon student achievement across other subject areas (Gibson & Anderson, 2008). Whilst the positive impact of the Arts is worthy of consideration, tying the concept of quality in the Arts to student performance in other areas limits awareness of the importance of the Arts to holistic learning and engagement in sociocultural practices. Dinham's (2017) description of *authentic* arts practices, which is rooted in a sociocultural view of the Arts, is considered to provide a more comprehensive understanding of what might constitute quality in arts education.

Dinham's (2017) work into *authentic arts practices* stands in contrast to traditionally held attitudes, which typically view the Arts as having lesser importance than other subject areas, and where arts engagement often represents fun 'downtime'. In contrast, *authentic arts learning* represents a genuine program of learning that aims to develop children's creativity and aesthetic sensibilities, their ability to express themselves through artistic engagement, and cultural engagement, all of which is grounded in arts knowledge and proficiency. Importantly, the end goal of such an approach to the Arts is not to experience fun downtime, or even to increase attainment in other subject areas. Of course, the nature of artistic exploration as enjoyable, and the well-documented benefits of the Arts to wider learning are still true of authentic arts engagement (Bamford, 2006; Dinham, 2017; Ewing, 2010); however they stand as valuable by-products, rather than the goal. Instead, the goal of authentic arts engagement is the development of children's creative and expressive capacities, key artistic skills, and the exploration of various art subjects that assist with forming aesthetic awareness and cultural understanding. These authentic processes are deemed to promote quality arts learning (Bamford, 2006; Dinham, 2017; Ewing, 2010), and are pivotal in forming an understanding of, and approach towards, generating quality arts practices in the context of this project. Notwithstanding, the concept of "quality" is appreciated as complex and contested, subjective and value-laden (Moss, Dahlberg & Pence, 2000), and rather than attempting to "pin down" such a concept, it is the intent of this project to value multiple perspectives on the concept, and to approach 'quality' arts learning as a direction, rather than a specific definition.

A sociocultural approach to arts learning is thus considered to embody the hallmarks of authentic arts practices, which contribute to quality arts exploration. A sociocultural approach to arts learning engages learners with their cultural world, develops their understanding of their place within, and the tools of, their culture, and establishes an understanding of various ways of cultural meaning-making; elements that are all promoted by the *Australian Curriculum: The Arts*. Students develop individual creative and expressive capacities to build understanding of - and contribute to the shaping of - their unique cultural context. Such an approach underpinned this research project's design solution, and is explored in greater depth in Chapters 4 and 5, which detail how the project's draft design principles were elicited and enacted by engaging with relevant theory.

2.2.1 Implications for arts learning in the family's Community of Practice (CoP)

When approached as a form of sociocultural practice, arts learning facilitates negotiated relationships, where a traditional teacher-centred approach to learning is renegotiated to allow for more “human interaction” (Holland & O'Connor, 2004, p. 8). Learners are co-constructors and knowledge-shapers in the learning process, as compared to knowledge recipients (Gadsden, 2008), which in turn contributes to students' development as confident, creative individuals (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2017). Such an approach fits well with the CoP model (Lave & Wenger, 1991). It also complements the approach of home educators who utilise situated learning in a CoP, in which parents and children are co-constructors in the learning process. A fundamental feature of a CoP is that all community members benefit from working together, and in the process, engage in transformative learning experiences. This study seeks to ascertain whether this occurs for participants in the project, and what implications this might have for arts learning in the home education context.

Whilst an understanding of home education as a form of sociocultural practice in which families are recognised as a CoP underpins this research project, it equally raises questions regarding the potential impact upon a child's arts learning when the parent lacks a background and/or confidence in the Arts. Studies have highlighted the context-dependent nature of creativity, concluding that exposure to creative environments is necessary for the full development of an individual's creativity and self-expression (Kaufman, 2016; Lubart, 1999; Nilson, 2011). Such concerns are also raised in classroom settings, where debate exists as to whether the arts should be delivered by a generalist classroom teacher, or an arts specialist. (Barton, Baguley, & MacDonald, 2013; Garvis & Pendergast, 2011). Those who advocate for skilled specialist arts teachers assert that generalist teachers do not possess the specific knowledge and skills that underscore effective teaching of the arts. Conversely, others maintain that the intimate knowledge of the students, the classroom culture and daily routines can permit a more authentic, integrated approach to the Arts (Seidel et al., 2009). Similar questions can be asked of arts learning within home education: whilst many home educating parents/carers may not possess specialist arts training, does their

intimate knowledge of their child's needs and interests promote a more authentic delivery of situated arts learning? A goal of this project is to ascertain the impact of parental background on arts learning when facilitating their children's arts education, but moreover, to gain insights into how the delivery of arts learning might be supported, even if background knowledge is lacking.

2.2.2 Implications for lack of confidence and background in the Arts

A related concern arises when considering the strong correlation that has been identified between teaching effectiveness and teacher confidence and interest, with content knowledge and confidence identified as integral to teaching proficiency (Dinham, 2017). One of the most substantial hindrances to the effective teaching of the Arts in generalist classroom teachers is a lack of confidence (Alter et al., 2009a). This again raises questions regarding possible correlations between home educator's background knowledge and confidence and its impact upon the nature of arts learning in the home. Croft's (2013) research into the experiences of qualified teachers who had chosen to home educate highlighted "across the board" confidence, and for many, greater access to resources and detailed knowledge of curriculum choices. Given that only a portion of home educators possess teaching qualifications, a number of legitimate concerns are held by some regarding whether home educated children are receiving a competent and comprehensive education, particularly from parents/carers who have no teacher training (Drabsch, 2013; Lubienski et al., 2013). And whilst research confirms that home educating parents have high levels of motivation and good intentions, such elements do not necessarily translate to quality instruction (Romanowski, 2001). Further concerns such as a potential lack of quality resources and facilities, lack of peer interaction, and an inability to effectively monitor the quality of instruction are also held (Boschee & Boschee, 2011; Drabsch, 2013). This study necessarily explores the extent to which home educating parents/carers can provide a comprehensive arts education. This will assist with developing understandings into the extent to which parental confidence and resourcing impacts upon the quality of arts engagement. Most significantly, such understandings are used to inform the developing design solution: homeiswheretheartis.com.au.

2.3 Online learning platforms

It has been argued through the examination of literature to this point that both home education and arts learning are most appropriately understood through the lens of sociocultural theory. Given the focus of this research project to generate an *online* arts learning environment for home educators, I now turn to a brief exploration of research literature pertaining to online learning, with a focus on ascertaining whether sociocultural theory again provides a suitable theoretical framework through which to understand and implement “best practice” in the design of an online learning environment for home educators in the arts. This is particularly important for the formation of draft design principles, and a more in-depth critical evaluation of sociocultural theory and online learning design is thus explored in *Chapter 4: Formation of draft design principles*.

2.3.1 Benefits, challenges and best practice in online learning

The proliferation of access to online technologies has significantly changed educational opportunities and given rise to potentially transformative educational outcomes (Bell, 2011; Finger, Russell, Jamieson-Proctor & Russell, 2007; McAvinia, 2016; Siemens, 2004). Digital technologies provide new opportunities for individuals to gain access to formal learning without necessarily having to attend a specific learning institution in person, and to access to a variety of multi-modal learning materials and interactive platforms for knowledge sharing. Similarly, self-directed learning opportunities have flourished, and individuals have access to vast online knowledge repositories in an almost limitless range of interest domains. Further, the rapid expansion and uptake of Web 2.0 services which permit the general public to share, and thus become *producers* of information, present further opportunities for learning and knowledge sharing. With such transformative opportunities new challenges have arisen: whereas in the past there existed a paucity of knowledge, and repositories of knowledge were generally considered robust and “trustworthy” (albeit representative of dominant hegemonic ideologies) – modern Internet users have access to vast amounts of content of varying and sometimes questionable quality (Siemens, 2004). Similarly, informal, self-directed learners are generally not able to gain clarification or support from a trusted educator in their learning endeavours (Kop &

Fournier, 2010). Education movements such as *Massive Open Online Courses* (MOOCs), have attempted to counter such challenges by providing the general public with access to learning opportunities that are facilitated by experts in various fields of study via social networking and quality online learning resources (McAuley, Stewart, Siemens, & Cormier, 2010). Not only are these initiatives providing self-directed learners with access to expert knowledge, they are contributing to more equitable learning opportunities, “replacing traditional hierarchical structures of command and control with pedagogical relationships of mentoring, training and the learning organization” (McAuley et al., 2010, p. 5).

At the turn of the century, these many opportunities and innovations that online technologies presented in education and learning gave rise to considerable optimism. Research literature around this time explored the innovative possibilities that online learning poses, especially for invigorating and transforming a range of formal education contexts (Herrington & Oliver, 2002; Kozma, 2003; Moursund, 2002; Siemens, 2004). However, a discernible gap still exists between the anticipated transformation of learning through online environments, in addition to a sense of disappointment about the relative failure of online learning to achieve the hoped-for impact in a number of educational spheres (Parker, 2015). A number of researchers and educators point to the frequent use of technology in providing new ways of doing the same things, with little advancement in learning outcomes (Lawless & Pelligrino, 2007; McAvinia, 2016). Others point to the slow uptake of enacting the opportunities to apply learner-centred learning approaches that digital and online learning presents, including lacking the time, technological proficiency and pedagogical understanding to enact these approaches (Parker, 2015). Finger et al. (2007) state that the key to effective learning is “the design and creation of exciting, intellectually challenging and authentic learning environments in which ICT changes not only what students learn but also *how* they learn (p. ix). Yet despite claims of online technology enabling “learner-centred pedagogy”, many forms of online instruction continue to conform to traditional, instruction-centred delivery, acting as distribution platforms rather than *learning environments* (Bijk et al., 2002). These findings show that the important characteristic for effective online learning is not the sophistication of the technology, but its *innovative use* (Kozma, 2003). Thus, a theoretical framework is considered foundational to rethinking pedagogy for online settings (Bell, 2011).

2.3.2 Learning theory for online learning design

A good deal of research and educational literature supports the use of constructivist and socio-constructivist design and teaching strategies for the development and facilitation of quality learning experiences in both online and face-to-face contexts (Finger et al., 2007; Herrington & Oliver, 2002; Parker, 2015). As compared to traditional approaches to education from the Behaviourist tradition (Pavlov, 2003/1960; Skinner, 1971; Thorndike, 1921), which views learning as an unproblematised process of knowledge transmission and internalisation, constructivist principles focus upon the learning *process* in which active learners are constructing their own knowledge via authentic problems in collaborative contexts (Brown, 2005; Finger et al., 2007). Socio-constructivism extends upon constructivist thought by including the significance of social interaction as a fundamental element of the learning process. The potential for online learning contexts to adopt strategies that are student-centred, authentic, integrated, collaborative and activity and inquiry-based has thus been extensively promoted for online learning contexts (Finger et al., 2007; Herrington & Oliver, 2002; Parker, 2015).

Based upon my earlier identification of sociocultural theory as a cogent theoretical framework for understanding both home education and quality arts practices, the question thus emerges: is sociocultural theory equally appropriate for the design of online learning environments? Bell (2011) states that the most pertinent determinant of a suitable learning theory is a consideration of the purpose and scope of the intervention, in addition to the experience and philosophical stance of the researcher or practitioner. Based upon earlier discussion of home education as a form of sociocultural practice, and the value of arts learning as authentic practice particularly when approached as a form of sociocultural activity, it thus stands to reason that a *sociocultural* framework may also be appropriate when considering a suitable learning theory to underpin the chosen approach to online learning for this project.

Sociocultural, constructivist, and socioconstructivist learning theories demonstrate significant overlap in their espoused views of the learning process, promoting it as the active construction of knowledge via authentic problems in collaborative contexts. However, Hall states that “Vygotsky’s [sociocultural] theories have been commonly included as part of the constructivist or socioconstructivist paradigm, not as a learning

theory in their own right”, and this conflation of the learning theories is evident in the work of a number of educators and learning designers, where sociocultural *and* socioconstructivist theory are assumed to be identical and simply named using varying terminology (Bates, 2015; Finger et al, 2007; Grabinger, Aplin, & Ponnappa-Brenner, 2007). However, I maintain a small number of subtle differences exist, and my position on these differences are explored in detail in *Chapter 4: Development of design principles*, however briefly here, the most significant difference between constructivism and sociocultural theories lies in the role of the social environment in the learning process. Constructivist theory proposes that learning is internalised by an individual via their active engagement with authentic problems, and socio-constructivist theory adds the value of social learning into this process: learning is *socially mediated*. Whilst sociocultural theory recognises these elements in learning, it focuses more extensively upon learning as *socially constructed*. Grabinger et al. (2007) state,

...sociocultural designers believe that learning comes from the learner’s participation in the community of practice. The designer makes it possible for learners to transform themselves into participating members of the community. The learning environment takes advantage of each student’s abilities and prior knowledge and experience by making it possible for students to work on meaningful projects within the community. (p. 6)

A sociocultural approach to learning thus emphasises learning through the “interdependence of social and individual processes in the co-construction of knowledge” (John-Steiner & Mahn, 1996, p. 191).

Lave and Wenger have contributed further to understandings regarding socially mediated and constructed learning, reconceiving learning as social and personal transformation in *Communities of Practice* (CoPs) (Lave & Wenger, 1991). In section 2.1.6, I explore the recognition that home education environments embody the attributes of a CoP, wherein the children are cognitive apprentices in the family’s community of practice (Barratt-Peacock, 1997, 2003; Jackson, 2015). However, the limitations of the family as a CoP are also noted in situations where the educating parent/carer may not understand “mature practice” or possess expertise in specific

learning arenas. For this reason, many home educating families form wider CoPs with the home education community as an integral element of seeking support (Safran, 2009).

The intention of this project's sociocultural learning design to operate as a CoP thus fulfils not only a recognised need in providing home educators access to an online community in which arts learning can be supported, it further aligns with the existing practice of home educators to seek support through wider CoPs (Safran, 2009). Interactive online technologies such as forums, webinars, chat rooms, and social media platforms permit such collaborative engagement between learners, further highlighting that sociocultural learning design presents a positive underpinning framework for online learning environments, promoting the use of collaborative technologies in transformative ways to facilitate socially-mediated learning (Hall, 2009). A number of educators and researchers affirm this, stating that CoPs in a digital world can be very effective (Bates, 2015; Peterson, 2009; Wenger-Trayner & Wenger-Trayner, 2015). Bates (2015) states, "given the openness of the Internet, the social media tools now available, and the need for sharing of knowledge on a global scale, virtual communities of practice will become even more common and important" (para 27).

Of further importance is the recognition that CoPs are considered "a powerful manifestation of informal learning" (Bates, 2015, para 21). Researchers who have contributed significantly to an understanding of sociocultural theory have focused on the ways that children and adults have been found to learn within *informal*, self-initiated learning contexts (Lave & Wenger, 1991; Rogoff, Callanan, Gutiérrez, & Erickson, 2016). This is valuable for a theory to underpin the design of this project, predominantly because the parents and learners for whom the learning environment is designed engage with the learning environment entirely of their own volition, according to their own timeframe, as compared to a more structured formal learning approach with set materials, processes and timeframes. Rogoff et al. (2016) propose a number of hallmarks of informal learning that provide useful clarity for potential features for an online learning environment:

- Informal learning is interactive and embedded in authentic contexts or personally meaningful activity;
- Discussion related to the learning is conversational, not didactic;
- Participation in the learning emerges from personal initiative, interest and choice;
- Assessment is intrinsic to the activity, and never for external purposes;
- Learners work from their existing knowledge and skills, honing and innovating upon these to develop new ideas and skills; and
- There is often a core component of play, or personal enjoyment.

These features of informal learning provide useful goals for the design of an online learning environment for home educators, and highlight how useful CoPs are in an informal learning context. Further, given that home educators frequently use CoPs in supporting their role in taking primary responsibility for their children's education (Safran, 2009), an online CoP is considered a valuable element of this project's online learning design.

An exploration of the challenges, benefits and literature surrounding learning theories suitable for online learning with respect to the unique requirements of this project thus confirms that sociocultural theory provides a valid theoretical framework. Given the research literature which suggests that home education is best understood as a form of sociocultural practice (Barratt-Peacock, 1999, Harding, 2011; Jackson, 2015), and the alignment of sociocultural approaches to arts learning with "quality" arts processes (Bamford, 2006; Cornett, 2011; Ewing, 2010), the adoption of a sociocultural approach to the design of online learning is considered a logical and cohesive choice. Further, research into "best practice" in online pedagogy demonstrates that active, learner-centred and collaborative learning approaches are extensively recommended, and easily facilitated through online learning platforms (Finger et al., 2007; Parker, 2015). Whilst constructivist and socio-constructivist approaches have received the greatest attention in research literature, sociocultural theory is found to provide additional benefits to learning design in informal and socially-mediated learning contexts, particularly with respect to the formation of online CoPs, making it particularly suited to home educators.

2.4 Summary of the research literature

This review of literature highlights the body of research that forms foundational understandings for this study. Home education is regarded as pedagogically unique and distinct from institutional learning practices, and is best understood as a form of sociocultural practice: situated learning within a family's CoP. Equally, quality arts engagement is understood as a form of sociocultural practice, enabling both a "growth medium" that facilitates personal and social growth through the stimulation of new ideas, new directions and different cultures, whilst documenting the values and interests of humans throughout history (Eisner, 2009). A sociocultural lens provides not only an appropriate means to understand arts practices within home education, but also provides insight into what might constitute "quality" practices within this domain, and whether a relationship exists between a family's attitude to the Arts and the quality of arts learning in that context. Evaluation of sociocultural theory with respect to online learning further confirms that online learning platforms can effectively facilitate active, learner-centred and socially-mediated learning processes, thus highlighting that this learning theory is suitable as an underpinning framework for the design of an arts learning environment for home educators. It is at the intersection of these issues that this research fills a gap in understanding, providing insight into how home educators, as both individuals and as part of a CoP, engage with the Arts, and how this may best be approached in the design of an online learning environment. This provides the foundation for potential ways forward in supporting quality arts practices within this diverse community.

CHAPTER 3

Methodology

This chapter describes how the project's qualitative research methodology was integrated with a Design-Based Research (DBR) approach. I begin with an explanation of my choice to use DBR, embedded in a qualitative research methodology, and demonstrate thereafter how the decisions made through the project represent a logical fit with both my research context and axiological preferences. A rationale for a qualitative research methodology is then provided, along with other important project details, ethical considerations and the research methods. A detailed overview of my specific application of Reeves' (2006) four phases of Design-Based Research is then provided, followed by an explication and justification for the approach to data analysis.

3.1 Theoretical and philosophical framework

The purpose of this research was to understand how home educators engage with arts learning in their individual contexts and how they can be best supported to enhance their confidence and competence in doing so. In order to achieve this aim, I sought contextual truths regarding participants' "lived experiences" (Van Manen, 1990, 2004) within their unique contexts. In the following sections, I detail how my epistemological, ontological and axiological preferences influenced the methodological choices throughout the project.

3.1.1 Epistemology, Ontology and Axiology

My approach to research is guided by a Constructivist epistemological and ontological position. Within the Constructivist research paradigm, Guba and Lincoln (1994) assert that the distinction traditionally identified between ontology and epistemology disappears. They contend the nature of 'reality' and how we come to 'know it' is understood as mental constructions founded in the experiences of individuals in their specific contexts. The contention that individuals experience the world uniquely, and as such, multiple realities exist based on the constructions of individuals from their

vantage points is one I have also experienced and therefore support (Hatch, 2002). This paradigmatic approach is most suitable to this research project, which is focused upon the generation of theories that contribute to understanding (Kasi, 2009) and to facilitating beneficial impact in a specific context (Cobb et al., 2003). Given the premise that knowledge is constructed through relative consensus, constructivist research promotes the co-construction of understanding between the researcher and participants. Importantly, this places the researcher as an integral part of the research process, as compared to the distant and objective Positivist researcher (Guba & Lincoln, 1994). This approach complements my role in the research where I engaged with participants in the co-construction of understanding which contributed to the design solution and the subsequent development of a set of design principles to underpin future learning design in home education.

In addition to the development of theories that most appropriately express the subjective experience of home educators, an important axiological foundation that influenced my approach to research was a focus on engaging in socially useful and adaptable research. This led to a consideration of the intended beneficiaries of the research, and whether claimed benefits would genuinely be in their favour (Coombes & Danaher, 2001; Danaher, Danaher, & Moriarty, 2003). Whilst the need for researched understandings regarding arts practices within home education is shown to be warranted, the manner in which this research was conducted needed to be sensitively approached in order to ensure that the research was genuinely beneficial to the home education community. Research has highlighted that some home educators hold a sentiment of mistrust towards institutional authority figures, which can by default also extend to educational researchers (Barratt-Peacock, 1997). As explored in the literature review, there is contention between various educational stakeholders regarding the extent of legislative scrutiny that home education should come under. Opinions range from those who see state regulation as burdensome and “excessively bureaucratic,” to those who consider that stronger policy and scrutiny are a necessary means to ensure educational equity (Lubienski et al., 2013; Monk, 2009; Smith, 2014). As explored in the literature review, many home educators maintain that educating their children at home is the family’s constitutional right, and some claim that legislative frameworks and scrutiny can undermine the relationship between home educators and educational authorities (Barratt-Peacock, 1997; Jackson, n.d., as cited

in Townsend, 2012). Further, educational research can exacerbate this, bringing potentially unwanted attention to the home education community (Smith, 2014). Howell contends, “It is not clear that increased scrutiny by policy makers, researchers, and academics will be warmly received or regarded as helpful by home schooling families” (2013, p. 356), and thus advises home education researchers to consider whether their proposed research is in the best interests of the home education community. I hold that educational research is fundamental to the promotion of genuine understandings regarding the practice and outcomes of home education, and in the best interests of the home educating community who are increasingly under scrutiny by educational policy makers (Liberto, 2016). I argue that a foundation of sound research prevents the misinformation, misunderstandings, and negative stereotypes that may lead to ineffective or overly restrictive regulation.

An important foundation to my approach to research was therefore a consideration of who would ultimately benefit from this research (Coombes & Danaher, 2001; National Health and Medical Research Council, 2007). I felt it important to consider who would be the intended beneficiaries of the research, and whether claimed benefits would genuinely be in their favour (Danaher, Danaher, & Moriarty, 2003). Levinson (2004), asserts that research often reinforces the marginalisation of oppressed groups; and whilst home educators may not be considered oppressed, many consider themselves to exist on the margins of society owing to their counter cultural approach to education (English, 2015a; Monk, 2004). A significant consideration at the commencement of this project was therefore how to approach the research in a manner that refrained from reinforcing negative stereotypes, that was genuinely representative of the experiences of Australian home educators, and most importantly, represented a project that could be directly beneficial to home educating families. I felt my insider status as a home educator was important in lending credibility to my role as a researcher and legitimacy to the research project.

The search for a research approach that complemented my epistemological, ontological, and axiological stance was a significant determining factor in choosing Design-Based Research as an applied research approach.

3.2 Design-Based Research

Design-Based Research (DBR) is a relatively new approach that has evolved in response to criticism aimed at traditional educational research, which some researchers have deemed to have only a loose and indirect impact upon educational practice and a negligible impact upon teachers, students and other stakeholders in educational systems (McKenney, Nieveen, & van den Akker, 2006; Reeves et al., 2011; Walker, 2006). Traditional educational research has been criticised for the ways in which findings – often conducted in laboratory settings – have been ‘inserted’ into classroom settings with “an appalling lack of impact” (Reeves, 2006, p. 60). Instead, DBR provides a viable alternative to traditional educational research that attempts to bridge the gap between research and practice and generate meaningful impact (Reeves et al., 2011).

DBR has its foundations in the learning sciences: an interdisciplinary field concerned with the development of empirical understandings of how learning occurs, how learning environments work, and how these can be enhanced (Anderson & Shattuck, 2012; Hoadley, 2007). The learning sciences emerged from the work of progressivists such as Dewey (1897, 1938), who emphasised the nature and importance of learning through hands-on, authentic experiences, and who conducted research ‘in the field’ in collaboration with teaching practitioners, rather than decontextualised laboratory settings (Hoadley, 2007). Like Dewey, learning scientists have been concerned with real world settings, and with studying learning in context (International Society of the Learning Sciences, 2004), focusing beyond knowledge acquisition to the design and implementation of context-specific learning environments and/or interventions and the enhancement of instructional methodologies (Hoadley, 2007; Markauskaite, Freebody, & Irwin, 2011). As such, the learning sciences have approached research in a manner that is informed by the intended audience or context, rather than out of a rigid methodological approach (Markauskaite et al., 2011). Emerging from this background, DBR therefore does not represent a methodology specifying data collection and analysis methods but a framework for research that draws upon multiple theoretical perspectives and research paradigms, and utilises a myriad of context-relevant methods and techniques (Barab & Squire, 2004; Reimann, 2011).

DBR employs an approach to research that has both a practical and theoretical focus. It represents a means to understanding how learning occurs that commences with the identification and analysis of a recognised problem, followed by the design and iterative implementation of an *intervention* to address this problem. It concludes with the development of learning theories resulting from the process that reveal insight into how learning occurs in the specific research context (Collins, Joseph, & Bielaczyc, 2004). Thus, in their aim to improve educational outcomes, the Design-Based researcher adopts the role of both *researcher* and *designer* in an interdisciplinary research approach, simultaneously advancing design, research, *and* practical application, all of which are rooted in a firm empirical base which often utilises both qualitative and quantitative data to describe the phenomena under study (Wang & Hannafin, 2005). Interventions are developed by adapting existing design principles, drawn from theoretical sources, for learning in related contexts. Iterations of the intervention are then trialled to refine more specific design principles and develop theoretical descriptions that identify why the design principles work and thus generate reliable, replicable descriptions (Brown, 1992).

DBR was a logical fit with my epistemological, ontological and axiological frameworks. As a constructivist researcher, I considered it appropriate owing to its pragmatic focus and acknowledgement that knowledge is constructed and negotiated in social contexts. In conceptualising this project, I sought to move beyond traditional education research practices, and sought an approach that re-engineered research as an endeavour that engaged in - and resulted in - practical, beneficial action. Further, by working collaboratively with participants, DBR would avoid appropriating participant knowledge or using research outcomes in an unhelpful manner to the home education community. It would allow me to invite and honour the participants' perspectives into issues that are of immediate concern, leading to practical outcomes and genuine benefit to research participants and the wider home educating community.

3.2.1 Qualitative research design

A qualitative methodology has been utilised. DBR projects are conducted in authentic contexts, where researchers work closely with practitioners in the “messiness” of the real world, using these settings as “natural laboratories” to gain both contextual and

general understandings of teaching and learning (Sandoval & Bell, 2004). This challenges the assumption that a researcher's external influence in real-world research settings can potentially contaminate the findings (Barab & Kirshner, 2001). DBR does not focus upon controlling variables, but upon *characterising the situation* (Collins et al., 2004). Obtaining rich, narrative data from multiple perspectives was therefore an important feature of this project in order to characterise the situation and develop an understanding of how the design functioned and responded to contextual variables. This often means that large amounts of data are generated in DBR projects, usually across a number of participants (Collins et al., 2004). This is evident in this project's data collection, detailed later in this chapter, which demonstrates the breadth and depth of data deemed necessary to gain a comprehensive, multi-faceted understanding of multiple issues of the phenomena under study.

Whilst a Mixed Methods Methodology is often advocated in DBR as an appropriate means to describe the phenomena under study and to reflect the complexity of the many contexts represented within the project (Brown, 1992) a qualitative research design was deemed more in keeping with my constructivist approach to research and the nature of the research aims and questions, which were focused on the experience of participants and how this could contribute to the collaborative design of the creative arts website.

3.2.2 DBR as an act of bricolage

When Design-Based researchers approach their specific research context, they necessarily adopt and adapt ideas from a variety of resources and research tools to generate an instructional sequence or learning environment and understand its effectiveness in context. This resembles the approach of the *bricoleur* (Levi-Strauss, 1962), a 'jack of all trades' who makes use of the available tools that are creatively adapted and utilised in inventive ways; ways which often differ from their original intended design (Wibberley, 2012). Denzin and Lincoln (2000) refer to the *qualitative bricoleur* as a quilt maker – one who pieces together a set of representations that meet the specific requirements of a complex situation in a strategic, pragmatic and self-reflexive way. DBR researchers follow *theory-guided bricolage*, selecting the most cogent tools to best understand their specific context and to make the most appropriate

selections and adaptations in the learning design (Gravemeijer, 1994, as cited in Gravemeijer & Cobb, 2006). Like Denzin and Lincoln's quilt maker, the DBR bricoleur "stitches, edits, and puts slices of reality together", thereby bringing "psychological and emotional unity to interpretive experience" (Denzin & Lincoln, 2000, p. 4). Theory guided bricoleurs do not attempt to simplify the complexity of the research context but use multiple methods to examine interpretations from multiple perspectives, modifying existing principles to reveal new insights.

In the spirit of the bricoleur, I employed the use of some quantitative survey results, even though taking a qualitative approach to the research as a whole. When research is approached as a *bricolage*, the researcher recognises that multiple epistemological positions can yield helpful understandings into the complexity and "messiness" of the research context (Greene, 2006). Such an understanding can yield a deeper engagement with many facets of an issue. This represents a central tenet of bricolage, whereby the researcher avoids the superficiality and the unilateral thinking represented in a single discipline, instead studying the methods of diverse disciplines, comparing methods, epistemological stances, and theoretical assumptions. As such, "[b]ricolage does not simply *tolerate* difference but *cultivates* it as a spark to researcher creativity (Kincheloe, 2001, p. 687). The variety of data collected through the project, outlined below, enabled complex, creative and context-specific insights that helped to generate understandings in the midst of the "messiness" of the Design-Based Research context.

3.3 The four phases of DBR

This Design-Based Research project was structured according to the four phases of DBR as described by Reeves (2006). The model was deemed appropriate owing to its focus upon technological innovation in educational contexts. Further, it has been utilised and affirmed by numerous DBR researchers, giving it credence as a framework (Hall, 2009; Herrington et al., 2007; Herrington & Reeves, 2011; Kervin, Vialle, Herrington, & Okely, 2006). This model consists of four phases as outlined in Figure 1. An overview of the focus of each phase in this project was provided in Chapter 1; however a more detailed discussion is now provided which gives an overview of each phase as outlined by Reeves, and how these were implemented in this project, including data collected during each phase.

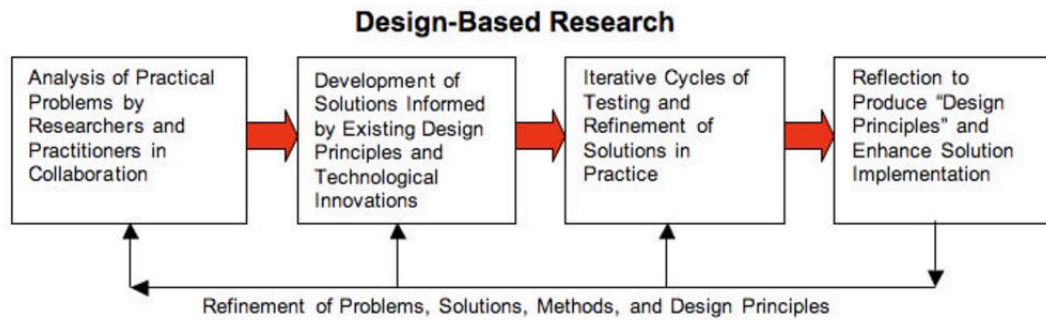


Figure 1 Four phases of Design-Based Research (Reeves, 2006)

A table summarising this information and the important links between research questions, data collection and analysis is provided in Appendix C.

3.3.1 Phase One: Needs assessment - Analysis of the problem in context



During Phase One, the researcher focuses on clearly identifying the problem in context through collaborating with participants and other stakeholders to identify an experienced problem, in addition to developing a broader understanding of salient issues through critically reviewing relevant research around the topic. Working with practitioners who possess an intimate understanding of their learning context and problems is believed to enable the generation of crafted solutions that value the rich insights of those for whom the design will be generated (Herrington et al., 2007). A valuable feature of this project was my dual role as both a researcher and member of the home education community. My immersion in the home education setting was used in conjunction with newly developed insights with participants in this project to confirm or modify my understandings of the problem in order to ensure that the project met an experienced need. The outcomes of this phase, and how these findings provided direction for the project were reported in Chapter 1, and a summary of strategic outcomes provided in Appendix A.

Data collected during Phase One included:

- a) Researcher reflections, based upon my immersion in the research context;
- b) A coded internet survey of 192 home educators to ascertain issues and challenges related to teaching the arts in their context via multiple choice answers and one short response (Appendix B); and
- c) A single focus group setting, with two home educating parents, who were asked to discuss their experiences, challenges and successes in facilitating arts learning in home education. Their thoughts and opinions were also sought on the development of the prototype arts resource.

3.3.2 Phase Two: Formative evaluation - Development of the design solution



Phase Two of the DBR process focuses on the development of a suitable design solution in response to the identified problem in context from Phase One. Importantly, this process commenced with the development of draft design principles: a draft set of theoretical guidelines for the learning design, synthesised from existing models, learning designs, and heuristics in related educational contexts. The draft design principles were then used to develop the prototype design (Herrington et al., 2007).

I began Phase Two with extensive reading as part of the literature review, engagement with relevant learning theory, and an exploration of existing design principles and heuristics. A synthesis of these understandings led to the formation of a draft set of design principles for the project, which are detailed in Chapter 4. These draft design principles then guided the development of the prototype learning design of homeiswheretheartis.com.au; discussed in Chapter 5. The prototype website was then refined via a process of expert consultation with professionals in arts education, home education and online learning.

Data collected during phase 2 included:

- a) an anonymous computer usability survey regarding internet use and technical skills to 14 home educating parents who had consented to participate as research participants in the arts learning environment (See Appendix D). The survey ascertained participants' internet and computing access and skill level in response to the identified skills required to utilise and contribute to the prototype arts learning environment; and
- b) interviews with three experts in relevant fields to this project: online learning, arts learning and home education (see Appendix E). Their expertise was sought regarding the prototype design solution, focussing upon best practice in their relevant domain and how the learning design might be improved.

3.3.3 Phase Three: Effectiveness Evaluation – Iterative testing and refinement



The prototype design solution, homeiswheretheartis.com.au, was iteratively trialled by approximately 80 home educating participants and refined in response to their feedback via online surveys, interviews and observations. Three iterations of the arts support resource were conducted. Participants for this phase of the research were invited to use the website, and their feedback and resulting data used to guide its iterative refinement. Owing to the nature of the project, it was permissible throughout this phase for further participants to progressively join the project without comprising its integrity, as more perspectives enabled a richer understanding of how participants were using and experiencing the website. Data collected included:

- a) three anonymous Internet surveys, each conducted towards the completion of every iteration of the trial (see Appendix F). Participant feedback was sought regarding the website's design, usability, effectiveness and possible improvements. Questions were multiple choice, including Likert scale ratings, and short answer;

- b) web log data, including forum postings from participants accessing the arts support resource and website analytics;
- c) email communication between participants and myself as the researcher specifically regarding their involvement in the project;
- d) 15 semi-structured 1-hour interviews with 5 adult participants who were using the arts resource. Interviews occurred towards the conclusion of each iteration of the website (see Appendix G); and
- e) eight observations of arts learning in action. Four out of the five interview participants agreed to an observational session in conjunction with their final two interviews, during which time they could conduct an arts learning activity with their children. Field notes and photographs of children and their artworks were collected for analysis.

Findings from the Alpha, Beta and Gamma cycles are detailed in Chapters 6-8.

3.3.4 Phase Four: Reflection to produce “design principles”



The final phase of the Design-Based Research process focuses upon the generation of both knowledge and product outputs. During this phase, the predominant research goal of generating a solution to an experienced problem is finalised. In the context of this project, this final phase led to the development of a set of design principles for the design of an online learning environment for home educators, and evidence-based heuristics that could inform future research and development in similar educational contexts. This is explored in Chapter 9.

3.4 Participants

Participant engagement with this DBR project varied according to the unique requirements of each phase of the project. The participants predominantly represented home educating parents/carers, with some interaction with home educated children, and three experts in related fields, including the fields of home education, online

learning, and arts education. The project received ethical approval from the University of Southern Queensland's Human Research Ethics Committee (HREC approval number: H14REA139, see Appendix H), and relevant documentation for the ethics process can be found in Appendix H and I.

Access to participants around Australia arose via my own connections with the local community, in addition to online communities of home educators. Importantly, I held no prior personal relationship with any participants. I was predominantly responsible for the recruitment; however a number of participants who were enthusiastic about the project shared the recruitment information with their own contacts, thus recruiting further participants through a snowball effect. The project's data collection was conducted in three distinct phases as outlined above, which necessitated a variety of participant groups and group sizes. This is detailed in Appendix J.

3.5 Data analysis

Following the principles of *bricolage*, I approached data analysis in the spirit of "custom building". Data analysis required the flexible adaptation of analytic tools according to the specific needs of each phase of the project which proceeded logically from the research questions. Analysis began early and was ongoing throughout all phases. Whilst taking an emergent approach to data analysis in response to the evolution of the research findings, it was nevertheless important to analyse the data through a considered approach in order to achieve credible, transferable, dependable and confirmable research. This enables resultant theory that is supported by data which has been analysed systematically and transparently (Creswell, 2007). Thematic analysis was chosen as an appropriate way to make meaning from the data.

Thematic analysis is not a research methodology but an analytic "sense making" approach that is helpful in developing rich and reliable analyses that reflect the complexities of the lived world. Rejecting a tightly structured and compartmentalised approach to data analysis, thematic analysis adopts multiple analytic techniques - chosen for their appropriateness to the research context. This enables the summary, synthesis, organisation and interpretation of large volumes of data over a wide range of data sources (Lapadat, 2010). It is generally approached inductively, whereby

significant themes are allowed to *emerge* through empirical observation, as compared to a deductive approach through which preconceived hypotheses are tested through research (Johnson, 2008). Inductive thematic analysis involves the search for patterns of meaning in the research data which are then used to develop general statements regarding the phenomena under study. It moves from a search for particulars to the development of patterns and finally to the generation of generalised statements (Creswell, 2007). This approach was considered the best means for the derivation of resulting design principles from the analysis process.

Throughout the course of this project, individual experience across the range of participants was used to glean understandings as to patterns that were helpful to the evolution of the website and the formation of design principles. These patterns emerged from a broad variety of data, with a search for points of convergence, relationships and explanatory principles between data sets (Hatch, 2002). In keeping with bricolage, dissonant findings were not viewed as problematic, but welcomed for the possibility of deeper insights they might yield, and points of contrast that could demonstrate the complexity of individual experience. As such, the comparing, contrasting, and converging of data generated a more comprehensive view of the research phenomena, providing a means of triangulation that simultaneously validated and enriched the analysis through the display of multiple perspectives, or refractions of simultaneous multiple realities (Denzin & Lincoln, 2000). Given the complexity of making generalisations regarding the diversity of home education, approaching analysis with an appreciation of multiple viewpoints was considered essential in representing the diversity and multiplicity of the practice.

An important recognition when approaching this project's data analysis was to acknowledge that my own interpretations invariably influence the analysis to some degree. Denzin and Lincoln (2000) refer to such a researcher as an *interpretive bricoleur*; one who understands that "research is an interactive process shaped by his or her personal history, biography, gender, social class, race, and ethnicity, and by those of the people in the setting" (p. 6). Interpretive analysis engages the researcher as an active participant in the analysis process through which their own interpretations, inferences, insights and conclusions form an additional layer of data that generates deeper insight into social situations. Interpretive analysis requires a researcher to

immerse themselves in the data which then permits the generation of explanations to make sense of the data as a whole. Burns and Walker (2005) argue that when partiality in research is acknowledged, the knowledge that is produced is “less distorted, more visible and hence revisable” (p. 67) than when there is no acknowledgement or acceptance of partiality in the research process. In keeping with this understanding, my impressions as a researcher were recorded in a journal, capturing helpful explanations that, when considered in conjunction with data sets, provided rich starting points for the development of interpretations. This approach foregrounds and values researcher interpretation, which is considered cogent given my experience as an arts educator, home educator, and curriculum designer. The approach to analysis is thus summed up as interpretive-thematic analysis. An overview is summarised in Table 1.

Table 1 Interpretive-thematic approach to data analysis

Thematic analysis – an iterative process for the project’s first three phases	Interpretive lens – an ongoing process through the steps of thematic analysis
<ol style="list-style-type: none"> 1. Themes for analysis are identified that emerge from the research questions <i>and</i> emergent issues in the data; 2. Data are summarised under each theme; 3. Patterns, themes and relationships within themes are identified, and then coded inductively according to those identified; 4. Raw data is revisited to check that identified patterns are supported; potential relationships among patterns and non-examples identified; and 5. Generalisations and theory from analysis are generated which inform successive phases of the project and final design principles. 	<p>Researcher immersion in the data leads to the identification of key issues, including those that may be represented as gaps, silences, or contradictions in the data. Focus is also upon discovering new impressions that may develop into interpretations that bring meaning to the data. Key questions might include, what is going on for the participants? What sense can be made of these events? What meaning do these activities have for the participants in this context? Journal entries are studied for salient interpretations, and data re-read, coding instances where interpretations are supported or challenged. This aids in making judgements about whether interpretations are supported by data.</p>

3.6 Criteria for quality research

Research must demonstrate that it meets the criteria of quality, however the traditional quantitative criteria of validity, reliability and repeatability were not considered applicable to this qualitative, constructivist project. Instead, the criteria of *credibility*, *transferability*, *dependability* and *confirmability* were considered more appropriate (see Guba & Lincoln, 1994). The following measures were deemed important steps in order to ensure acceptability and quality in this research project.

3.6.1 Credibility

Credibility refers to whether the results of the research are believable. Lincoln and Guba (1985) argue that ensuring credibility is one of most important factors in establishing the extent to which a researcher's claims are trustworthy, and the extent to which they are congruent with reality. A number of strategies, recommended by Lincoln and Guba (1985) were adopted in this project to develop and demonstrate the credibility of findings. These included:

- *Prolonged Engagement*: Lincoln and Guba (1985) maintain that a researcher's prolonged engagement with the research site builds trust with the participants, minimises distortions due to the influence of the researcher's presence, and allows them to experience a breadth of variations in the research context. The design solution in this project was conducted over the course of an entire school year in 2015, allowing sufficient time in the field to develop genuine understandings of the participants, their contexts and the phenomena under study.
- *Persistent Observation*: Throughout the prolonged engagement of the design solution, I interacted with the website on a near-daily basis, enabling me to "identify those characteristics and elements in the situation that [were] most relevant to the problem or issue being pursued and focusing on them in detail. If prolonged engagement provides scope, persistent observation provides depth" (Lincoln & Guba, 1985, p. 304).
- *Triangulation*: Triangulation helps to expose the assumptions, limitations and reductionism that can occur with unidisciplinary approaches (Kincheloe, 2001). The collection of various data forms throughout this project enabled the

development of multi-faceted understandings that yielded greater insight into the richness and complexity of particular issues, and ensured a rich and comprehensive understanding of the phenomena under study.

- *Peer debriefing*: Meeting with peers who are not involved in the research and who can ask probing questions regarding methodology, bias, emerging conclusions can help develop credibility (Lincoln & Guba, 1985; Shenton, 2004). Whilst peer debriefing was not specifically employed, interaction with supervisors and the use of expert consultations helped to provide a manner of peer debriefing.
- *Negative case analysis*: Whilst researcher bias is inevitable, it was important to minimise this (Kelly, 2009). Throughout each phase of the project, I engaged in negative case analysis by which I consciously located and examined data that disconfirmed my expectations (Lincoln & Guba, 1985). Reporting on data that deviated from my expectations was not only an important element to cultivate research credibility, it further helped to faithfully reflect the diversity of participant perspectives and thus enriched and broadened the understandings developed through the research.

3.6.2 Transferability

Within a Positivist paradigm, researchers are often concerned with the transferability and generalisation of findings to a wider population. However, a Constructivist stance in qualitative research maintains that all research is conducted in specific contexts and thus applicability of findings to other situations and populations cannot be assumed (Shenton, 2004). Lincoln and Guba (1985) therefore propose that sufficient contextual information about the research context must be provided. With sufficient description of the phenomena and context under study, the reader, rather than the researcher, is then able to determine the level of transferability to other contexts. With this in mind, and with the understanding that this research project worked with a small number of home educators as representative of a larger home educating population, I determined that it was important to engage in:

- *Thick description*: For each phase of the research, sufficient detail regarding the research setting, culture, participants, and environment were provided in

order to enable others to ascertain if the research setting is sufficiently similar to their own context, and thus if the research is generalisable to it.

3.6.3 Dependability

The criteria of reliability – the notion that repeating the research process within the same context, using the same methods and participants will yield the same results – is unsuitable to the dynamic nature of a qualitative research context. Collins et al. (2004) assert that design solutions within DBR can never be consistent: different practitioners are faced with contextual uniqueness and personal decisions at every step of the process, meaning that consistency across different contexts cannot be ensured. Instead, the criteria of dependability is more relevant, assessing the extent to which the researcher's claims are error-free, logical, and consistent (Lincoln & Guba, 1985). However, dependability is also recognised as closely tied to credibility: fulfilment of credibility “goes some distance in ensuring [dependability]” (Shenton, 2004, p. 71). A number of strategies were thus employed to ensure the dependability of the findings in this research project:

- *The process of expert consultation:* Opening the prototype website to the scrutiny of experts in related fields for their critical comment was an important step taken to enhance its dependability;
- *In-depth coverage of the research design and implementation, data gathering, and reflective appraisal of the project:* In-depth coverage of each step of the research has been provided in this thesis to permit the reader to assess the extent to which sound research practices have been followed (Shenton, 2004);

3.6.4 Confirmability

When establishing the confirmability of the researcher's findings, it is important to ensure, as far as possible, that these are representative of the participant's experiences, and not the researcher's personal preferences (Shenton, 2004). This is particularly important in DBR, which is exploratory and speculative (Herrington et al., 2007), and as such, detailed description is required to ensure the research has been carried out methodically and rigorously. An important feature of addressing the criteria of confirmability was an:

- *Audit trail*: Shenton (2004) proposes that “the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, if not necessarily to gain the same results” (p. 71). A transparent description of all stages of the research, from raw data to final analysis has thus been given, meaning the research approach and outcomes are defensible.

3.7 Chapter summary

This chapter has explained and justified the methodological approaches taken throughout this qualitative research project. The choice to use DBR has been shown as a logical fit with my Constructivist epistemology and ontology. More importantly, as an applied form of research, I have also demonstrated that DBR aligns with my axiological preference for socially just research processes that attempt to give agency to, and generate genuinely useful outcomes for, the research participants. I have provided an overview of the data collected during the various phases of the project, of participant recruitment processes, and the approach taken to data analysis. The chapter concluded with strategic decisions put in place to develop integrity across the research process. In the following chapter, I detail the development of the project’s draft design principles.

CHAPTER 4

Phase Two: Development of design principles



This research project explores how collaborative learning environments can be designed for home educators to facilitate high quality creative arts engagement that meets the contextual needs of individual families and contributes to the enhancement of the home educating community. In Chapter 2, I explored the nature of home education as pedagogically unique, and as a form of sociocultural practice, highlighting how such understandings were foundational for the development of a design solution for arts learning in home education. The research approach was then outlined in Chapter 3, in which the second phase of Design-Based Research (DBR) was described as the phase in which the initial design solution is developed. Importantly, in the generation of this design, it is vital to first develop the project’s theoretical framework and the draft principles to guide the design solution (Herrington et al., 2007). This chapter thus outlines the process by which I developed the theoretical design that preceded the practical process of designing the intervention. Existing guidelines and models for home education, arts education, and online learning environments are explored and analysed for design criteria which underpinned the project’s design principle formation. Finally, the development of new understandings from this process are synthesised to develop a set of draft design principles for the initial design solution. The prototype design solution as informed by these principles will be explored in the following chapter.

4.1 A two-tier approach to developing draft design principles

Examples of learning design guidelines for arts learning in home education in online learning environments were not encountered in the literature surveyed. This is understandable as such a specific niche at the intersection of these three domains is

unlikely to have been extensively explored. I therefore engaged with existing models, guidelines and design principles across all three domains relevant to the project - home education, arts education, and online learning environments – to seek commonalities that would provide theoretical guidance for the development of design principles at the centre of these three domains. Early engagement in this process revealed a key distinction between my project’s intended design and other examples of online learning design. The learning environment in this project was intended to engage with parents/carers who would then facilitate their children’s learning. Whilst numerous websites and learning environments are aimed at teachers, online learning environments are predominantly designed to work directly with learners. The decision to focus on parents/carers in this process rather than home educated students was predicated on the understanding that home education is characterised by how parents/carers facilitate their children’s learning, as discussed in Chapter 2. This recognition of the specific needs of this online learning environment led to the conclusion that a design for arts learning in home education contexts would need to be developed in relation to the following two levels:

- **Level 1: Parent as facilitator of their children’s learning.** This level of the design would focus on providing curriculum and teaching resources for parents/carers as teachers of their children. Many home educating parents/carers adopt and adapt a variety of curriculum and learning resources in facilitating their children’s education (Harding, 2011). A paucity of arts-learning curriculum and teaching resources specifically designed for home education contexts was identified in Phase one of the research, highlighting the need for such resources. The proposed online environment would therefore need to provide authentic learning tasks and learning resources to scaffold meaningful arts learning in individual home education contexts.
- **Level 2: Parent as learner in an online CoP.** This second level of the design would focus upon supporting parents/carers in their role as home educators, and by extension: arts educators, through the sharing of community strengths. It was decided that the learning environment would include features that would permit the formation and support of an online Community of Practice (CoP): a group brought together through their shared interests through which the

sharing of information and experience enables members to learn from each other (Lave & Wenger, 1991). The online CoP for home educating parents/carers within the website would enable the mutual construction of understanding regarding arts learning in home education that enhances individual teaching and learning, and facilitate mentoring roles between “experts” and “newcomers” in home education and/or arts learning. Importantly, families engaged in the online CoP would have the opportunity to further contribute to the Level 1 website resources by adding materials from their own arts engagements that may assist other families.

This concept is explored in Figure 2, which demonstrates how the online CoP for parents/carers within the website informs the enactment of authentic learning tasks in individual contexts, and how the enacted learning in individual contexts reciprocally feeds back into the online CoP through the contributions of those families to the website arts-learning resources. As such, the online CoP supports the family’s CoP, which reciprocally contributes an ongoing reconstruction of experience that develops the online CoP.

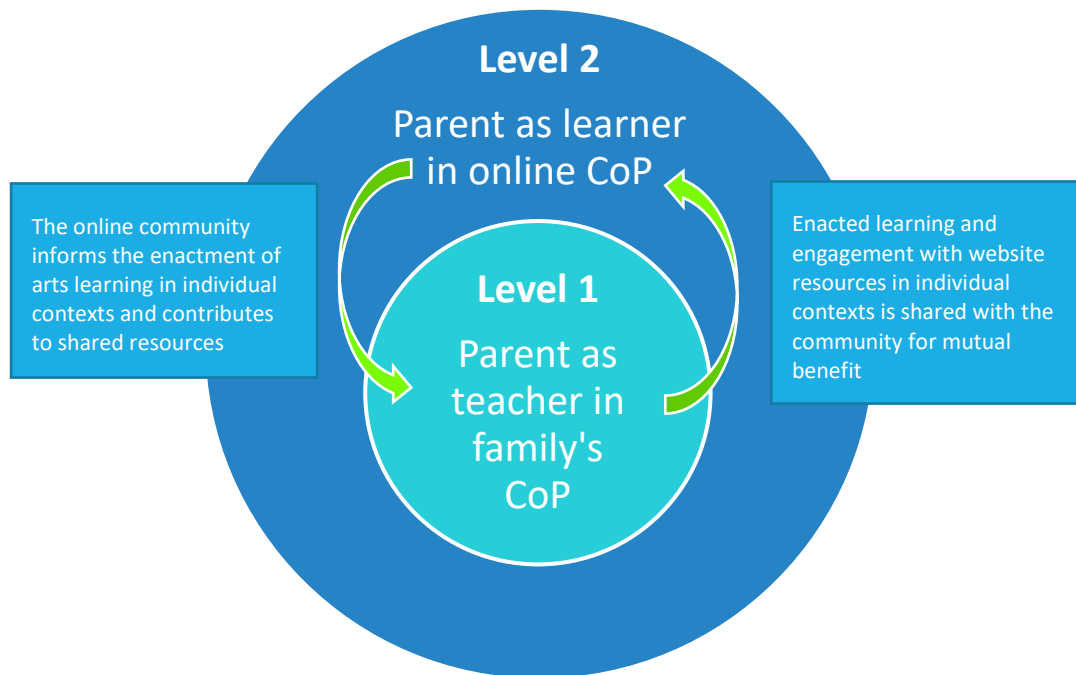


Figure 2 The two tiers of learning design for home educators

To demonstrate the process of developing the draft design principles, I begin with an exploration of literature on home education, which provides the rationale for sociocultural theory as a cogent theoretical framework to underpin the formation process. Key design criteria are also identified for learning design for home educators. This is followed by an exploration of arts education from a sociocultural perspective, and the identification of design criteria that must inform learning design in arts learning. Following this, I examine existing design principles in examples of quality online learning environments, which inform design criteria for online learning design. I conclude the chapter with a synthesis of key concepts explored across the three domains, which informs the formation of draft design principles appropriate to the two levels for this project.

4.2 Home education – sociocultural theory as a foundation for design principles

Chapter 2 explored the rationale for understanding home education as a form of sociocultural practice, in which children are viewed as cognitive apprentices in the family's CoP (Barratt-Peacock, 1997). This description of home education has been affirmed by numerous Australian researchers (Barratt-Peacock, 1997, 2003; Harding, 2011; Jackson, 2015; Thomas, 1998) and provides a helpful model for understanding home education as pedagogically distinct from institutional learning. When designing learning products and environments, it is vital to engineer interventions that are grounded in suitable theoretical frameworks (Brown, 1992; Hall, 2009). Given the identification of home education as sociocultural practice, sociocultural theory was considered the most cogent theoretical framework for the development of the project's draft design principles. The following section explores key concepts and guidelines emerging from major sociocultural theorists, with reference to how these are enacted in home education contexts. Throughout the discussion, key concepts are identified that form useful criteria for the development of design principles.

4.3 Sociocultural learning theory and its relevance to home education

Sociocultural theories developed from the work of Russian theorist, Lev Vygotsky in the 1930s - although they did not attain widespread popularity until the 1970s following translation into English - and have since been built upon by a number of “neo-Vygotskian theorists” including Lave and Wenger (1991, 1998b, 2005) and Rogoff (2008). Sociocultural theory posits that human activity is always located in a particular historical, cultural and institutional context and as such, human activity cannot be understood by looking at any individual devoid of context. With regard to learning processes, sociocultural theory does not focus upon the acquisition of knowledge, but upon a learner’s engagement with a CoP in which learning occurs as a feature of membership in that community (Lave & Wenger, 1991; Rogoff, 2008). As a theoretical framework, it provides theories and methodology that permit the development of understanding regarding the way that humans simultaneously shape, and are shaped by, the social and cultural world (Daniels, 2008), and enables the educator to enact methods that align with understandings of how learning occurs in authentic, social contexts.

It helpful to understand sociocultural learning principles by noting their difference to traditional instructional design. Traditional instructional processes have emerged from Behaviourist schools of thought (Pavlov, 2003/1960; Skinner, 1971; Thorndike, 1921), which conceived learning as a linear process of transmission, wherein instruction is broken into individual objectives of decontextualized knowledge which are then transferred to the learner. This approach does not consider the nature of the learner or the context in which this has occurred, and suggests that learning is an unproblematised cerebral process of ‘absorbing’ the new content (Grabinger et al., 2007). A major criticism of such an approach is that it renders the knowledge “inert,” whereby it is received into the mind, but not utilised (Whitehead, 1959). In addition, the knowledge or skills attained in the decontextualized situation may not be implicitly understood or applied effectively in separate contexts (Herrington & Oliver, 2000). For example, in learning the overall task of written communication, a learner may be instructed in spelling and grammar, in addition to other rules and formulae, with such concepts receiving specific, decontextualized instruction. A student might

successfully define when to use *their*, *they're* and *there* in isolated grammatical exercises, yet may have difficulty choosing the correct one when engaged in story writing. In contrast, a sociocultural learning approach focusses on large, open-ended tasks, often in authentic contexts. These will often require complex problem solving of interrelated tasks. It is asserted that such learning leads to flexible, readily transferrable knowledge structures, higher levels of critical and creative thinking, and problem solving skills (Grabinger et al., 2007; Gunawardena et al., 2006).

The learning that has been identified as taking place in home education aligns with sociocultural learning approaches. Through domestic occupation in the family unit which represents “a way of connecting learning to the real, rather than the academic, world” (Barratt-Peacock, 2003, p. 106), the child engages in authentic experiences that give rise to questions for more structured study or discussion. Through conversation as a forum, “[m]embers collaboratively engage in the maintenance and development of joint constructions of reality as part of their own development” (Barratt-Peacock, 2003, p. 104). The learner gains situated understanding in authentic contexts, as compared to the “abstract representations, with decontextualisation” that are characteristic of schooling (Barratt-Peacock, 2003, p. 104). Such understandings give rise to the **first design criterion**. Learning design for home educators to facilitate with their children should:

- align with social processes in the family’s Community of Practice.

A number of key concepts emerge from sociocultural theory that demonstrate alignment with home education. These key concepts include mediation, learning tools, the social environment, and the Zone of Proximal Development (ZPD).

These will each be explored, noting their relevance to home education and therefore to learning design in the field of home education.

4.3.1 Mediation:

Sociocultural theorists assert that learning is mediated. Learning is not an individual matter or a simple process of transmission, nor does learning occur as a *direct* result of activity but indirectly, via other people’s interactions with the learner and use of

mediatory tools which facilitate the learning process. Lave and Wenger (2005) see learning as participation in social practice by which understanding is constantly evolving in a continuously evolving set of relationships with both the world and those within it. This is an apt description of the home education context, where learning is mediated via the child's participation in the family's social practice. Two important aspects in the mediation of learning are therefore identified for this study: mediatory tools and the social environment.

4.3.1.1 Learning tools:

Vygotsky proposes that learning is mediated by social tools or thinking tools (2012/1962). He views speech as the key tool of the mind, alongside other tools such as language, art, numbers, signs and systems by which human cultures communicate and understand each other. The tools are made available to learners via those who already possess them: "the masters", who act as interpreters and guides in the learner's cultural apprenticeship. The tools do not have any capacity to create intellectual functioning. Rather, through their use in making sense of experience, they provide a means to develop intellectual functioning (Renshaw, 1992). These mediatory tools thus function on two levels: first externally, wherein the expert teaches the novice how to use the tool, which becomes the focus of interaction between them. Second, the tools function internally: the learner begins to use the tools to express their own thoughts, thus facilitating further cognitive development (Brown, Collins, & Duguid, 1989). Importantly, it is not the tools that are important themselves, but the meaning with which humans imbue them.

Research by Barratt-Peacock (1997, 2003) and Thomas (1998) emphasises the significance of conversation in home education contexts, where speech – the key tool in cognitive development - mediates interactions in a "constant exposure of views, questions and issues to 'public' debate and scrutiny"(Barratt-Peacock, 2003, p. 108). Through family conversation and domestic occupation", children are guided into wider use of increasingly complex tools of communication relevant to their contexts. Their parents/carers act as guides to the wider field of adult practice where learning tools are increasingly put into meaningful use. This highlights an important difference between actively using tools and merely acquiring them: those who actively use learning tools build an evolving understanding of how to use them with intent, and

how using them yields increasing understanding of the world (Grabinger et al., 2007). Thus their understanding of both the tools and the world develops. The authentic nature of family conversation, arising from experiences and questions in context, promotes the development of tools in the home education environment, which then enables knowledge transfer to new contexts (Jackson, 2015).

A **second design criterion** is thus identified. Learning design for home education should:

- promote the development of learning tools in social contexts prior to the internalisation of learning tools through context-specific action.

This point highlights the interconnected nature of learning as mediated by both tools and the social environment.

4.3.1.2 The social environment:

Whilst sociocultural theory posits that learning is mediated via tools, this process requires interaction with others who facilitate the learning process. The social environment is necessary for the expert/apprentice experience, whereby those who are proficient with the tools induct the new learner in the use of tools. Learning is thus advanced through social interaction; knowledge construction occurs socially through the negotiation of meaning (Brown et al., 1989; Vygotsky, 2012/1962). Ideas are continually exchanged and new understanding negotiated, making collaboration vital to learning.

Understanding learning within any context therefore requires a lens that acknowledges the significance of the social processes within the culture of origin. Thomas (1998) refers to this process as *enculturation* – the acquiring of fundamental cultural understandings naturally through everyday social interaction; a process which he identifies as occurring in home education. The child is given opportunity to engage in the key processes identified by Barratt-Peacock: domestic occupation, conversation, role modelling and mentoring (2003).

The centrality of the social environment to the learning process was expanded upon by Lave and Wenger's (1991) concept of CoP. They assert that CoP participation

begins with observance from the boundaries, or “legitimate peripheral participation” and as the learner deepens their engagement, their participation moves from being at the boundaries to increasingly engaged levels of participation as a fully functioning agent. Legitimate peripheral participation enables the apprentice to observe mature practice, to learn the language and stories of the CoP, and to be able to increasingly use this language both within and about the CoP (Herrington & Oliver, 2000). This is an apt description of the home education context, in which children are viewed as joint venturers who are engaged in increasingly mature practice within the family, contributing to its success (Barratt-Peacock, 1997, 2003). Children are not learning as individuals beside other individuals, but as members of a warm, relational community (Jackson, 2015).

In the CoP, Lave and Wenger refer to the learner as a “cognitive apprentice” – a term also used by Barratt-Peacock (1997, 2003) to describe the role of children in the family’s CoP. Similar to the traditional apprenticeship model, the cognitive apprentice is able to acquire, develop and use learning tools in authentic activity with the guidance of one who is already using these tools with purpose and meaning in an authentic situation. Through authentic activity, apprentices enter the cultural domain of the activity, thus understanding their activity as part of the wider socio-cultural domain in which they are operating, facilitating meaningful and purposeful learning (Lave & Wenger, 1991). Such learning is often referred to as situated learning: “the notion of learning knowledge and skills in contexts that reflect the way the knowledge will be useful in real life” (Herrington & Oliver, 2000, p. 24). A critical aspect of this is the child’s involvement in the CoP.

A **third and fourth design criterion** are thus identified. Learning design for home educators to facilitate with their children should:

- facilitate relational learning that enables parents/carers and children to develop joint constructions of reality as members of the family’s CoP; and
- facilitate authentic tasks.

4.3.2 Zone of Proximal Development (ZPD)

Sociocultural learning theories posit that education should focus on bringing a child's current level of conceptual understanding into contact with more abstract concepts introduced by "cultural experts" (Renshaw, 1992). The learning environment is key to supporting this process in a manner that is optimal for the learner, helping them to develop new or more complex learning tools in order to meet the demands of the new situation. Vygotsky referred to this optimal environment as the Zone of Proximal Development (ZPD). This concept was further refined by Lave and Wenger (2005) who placed emphasis on the "scaffolding" that was provided by a more experienced person. Under this description, the ZPD refers to "the distance between problem-solving abilities when assisted by or collaborating with more experienced people" (p. 144). As a child's competence grows, the teacher supports further learning such that children increasingly self-regulate. Within home education contexts, the intimacy of the parent-child bond affords the parent a deep insight into their children's needs (Harding, 2011), thus enabling arguably richer engagement with relevant and challenging learning experiences, and facilitation of appropriate mediation.

The **fifth and final design criterion** is identified. Learning design for home educators to facilitate with their children should:

- be flexible in order to allow parents/carers to work within the child's ZPD.

4.3.3 Summary of sociocultural principles underpinning home education.

This section has explored the key concepts emerging from sociocultural theory and its relevance to learning in home education environments. Sociocultural theory was therefore deemed as highly relevant for the design development of this research. Engagement with sociocultural theory and its relevance to home education has led to the development of the following design for home educators:

1. Align with social processes in the family's CoP;
2. Promote the development of learning tools in social contexts prior to the internalisation of learning tools through context-specific action;

3. Facilitate relational learning that enables parents/carers and children to develop joint constructions of reality as members of the family's CoP;
4. Facilitate authentic tasks; and
5. Be flexible in order to allow parents/carers to work within the child's ZPD.

I will now turn to the second dimension of the design for learning content relevant to this research project: an examination of existing guidelines for arts learning.

4.4 Arts Education – existing design principles, guidelines and models

In Chapter 2, the argument for exploring arts practices within home education as a form of sociocultural practice was provided. Based upon the rationale that sociocultural theory provides a relevant lens to explore home education, it was argued that arts practices within home education are best understood when approached as sociocultural practice. This was further supported with an exploration of literature and elements of the *Australian Curriculum: The Arts* that collectively suggest that the arts form an integral element of sociocultural practice, by engaging learners with their cultural world, developing their understanding of their place within and of the tools of their culture, and establishing literacy in the various ways of cultural meaning-making (ACARA, 2017; Bamford, 2006; Cornett, 2011; Ewing, 2010). As such, I argue that the highest learning gains are attained when arts learning is approached from a sociocultural learning design, whether in traditional schooling, home education, or another learning context. Thus, in order to develop potential draft design principles that could underpin learning design specifically for arts learning for home educators, a number of models and guidelines for arts learning approached from a sociocultural perspective were explored. I encountered significant correlations across the literature, which demonstrated extensive agreement amongst arts practitioners, educators, curriculum writers, and researchers. The following common characteristics were identified: authentic, integrated tasks; negotiated tasks; open-ended learning tasks; scaffolded instruction; relational learning; and focussed instruction on learning tools. These will now be explored, with reference to how such approaches align with sociocultural theory and potential design criteria for the formation of design principles.

4.4.1 Authentic, integrated tasks

An integrated, inquiry-based approach to arts learning is extensively affirmed as a more “authentic” (Dinham, 2017) and “meaningful” (Cornett, 2011) way of engaging with the arts. It is also an approach to learning which naturally aligns with the nature of experiences in life which are in turn embedded in meaningful contexts. Early proponents for integrating arts learning arose from the writings of Dewey (1897), who saw the Arts as a necessary part of an integrated curriculum rather than discreet subjects. In integrated projects, learners explore a theme, topic, experience or concept and students engage in sustained, in-depth inquiry via linked arts experiences. Such an approach is most often recommended as part of an arts-rich, or arts-infused approach to education, which engages with arts learning as part of a broader unit of learning and that “make the arts a seamless part of learning and teaching” (Gadsden, 2008, p. 38). Embedding learning across both arts disciplines and wider curriculum areas is likewise encouraged within *The Australian Curriculum: The Arts*, although not to the extent that the above arts educators and researchers affirm (ACARA, 2017).

A project-approach to arts learning is extensively recommended as the most effective means of engaging with arts learning (Ballengee-Morris & Stuhr, 2001; Daniel, Stuhr, & Ballengee-Morris, 2006; Dinham, 2017; Ewing, 2010; Gadsden, 2008; Katz, 1998; Russell-Bowie, 2015; Stott, 2011). Projects allow students to make decisions and to collaborate with peers and their teacher. It is believed such social opportunities for learning enhance children’s confidence in their intellectual powers and stimulates further learning, in addition to understanding a topic in depth, which engenders a sense of mastery and an appetite to understand other subjects in depth (Katz, 1998). Herrington and Oliver (2000) maintain that when learning and context are separated, learners tend to see knowledge as a final educational product, instead of as a tool to solve problems. However, an integrated arts approach contextualises arts learning, situating it as an authentic means of engaging in both learning about and expressing understanding of the wider world. An integrated, project approach to arts learning thus aligns closely with Herrington and Oliver (2000) and Brown et al.’s work (1989) on situated learning. It is considered to yield learning that is coherent, which stimulates genuine connections across disciplines, and allows multiple interpretations to be understood and expressed.

Through this process the **first criterion for arts learning design** was identified:

- integrate arts learning across learning domains in situated learning projects.

4.4.2 Negotiated learning tasks

An additional but pivotal element in developing authenticity in learning tasks is the negotiation of learning tasks between learner and teacher, which invites the learner's perspectives, provides a point of personal connection, and enables learning to occur within the learner's ZPD (Ballengee-Morris & Stuhr, 2001; Cornett, 2011; Daniel et al., 2006; Gadsden, 2008; Katz, 1998; Rinaldi, 1998; Russell-Bowie, 2015; Stott, 2011). When both the teacher's and child's minds are engaged in matters of real interest, both are generating new understanding, thereby contributing to the development of both partners as individuals and as a CoP. Negotiated learning further facilitates situated cognition (Brown et al., 1989) by generating learning tasks that engage with the learner's social, cultural and physical world; knowledge is therefore embedded in meaningful activity.

Based upon these understandings, a **second design criterion for arts learning design** was identified:

- negotiate learning projects between the teacher and learner.

4.4.3 Open-ended pedagogical tasks

The Arts represent unstructured learning domains (Dinham, 2007; Gadsden, 2008) wherein concepts can vary and be applied in a broad variety of ways, ungoverned by rules or laws and possessing no predictable outcomes. Similarly, Holland and O'Connor (2004) see arts learning environments as "structured chaos": co-constructed learning environments between teacher and students where they can learn from each other, critically reflect upon their learning and recognise connections to their wider world of experience. The Arts enable a real opportunity to shift from traditional transmission modes of teaching, to engage with non-linear units of learning that facilitate high-level, negotiated units of learning that engage students critically and creatively and that invite high levels of student sharing of personal ideas, enabling the forging of personal connections with meaningful learning. They naturally invite

interpretation and innovation and as such, should be engaged with via open-ended tasks whereby a challenge is presented to learners that presents a multidimensional approach to exploring the central concept or theme (Cornett, 2011; Dinham, 2007; Ewing, 2010; Holland & O'Connor, 2004). Students may follow lines of inquiry based upon interest, or emerging ideas or understandings to arrive at new conclusions, rather than a pre-determined “correct” outcome. This facilitates ongoing reflection as compared to reflection only at the conclusion of the learning process, and aligns more closely with how learners naturally engage in problem solving and knowledge construction (Brown et al., 1989; Herrington & Oliver, 2000).

These understandings led to the development of a **third design criterion for arts learning design**:

- develop open-ended tasks.

4.4.4 Scaffolding/working in the ZPD

Whilst arts learning is to be open-ended, this does not mean it has to be unstructured. Open-ended tasks can be structured and supported, or – in socioculturally-relevant terms - *scaffolded*. The teacher prepares, guides and supports student exploration and processes, thus working within the learner’s ZPD to bridge the gap between the children’s current stage of functioning and higher levels of functioning that are just out of reach (Cornett, 2011). Former approaches to arts learning, influenced by Cizek’s (1865-1946) “child art movement” flowed from the belief in children as naturally creative and artistic; a philosophy which positioned teachers as passive observers who facilitated children’s creative explorations and whose role was simply to provide the tools and environment for children to explore according to their intuition (see Tarr, 1989). This represented a radical departure from earlier art education movements influenced by theorists such as Pestalozzi (1977) and Froebel (1885) who advocated for a gently structured, developmentally-appropriate approach to arts education. However, shifts in arts education based upon Vygotsky’s sociocultural theories led to a movement away from Cizek’s child-centred learning back to an approach under which children’s learning was scaffolded by the teacher. Under a sociocultural view of learning, children are encouraged to observe, plan, create, reflect, and develop skills in the arts (ACARA, 2017; Stott, 2011). Through scaffolded instruction, an individual

student may develop knowledge and understanding as to concepts and processes that they would not have encountered without assistance. Additionally, they may develop enriched understandings of their sociohistorical context and their place within it, and have an opportunity to contribute to the collective transformation of the culture in which they locate themselves – or at least see the potential to contribute to this (ACARA, 2017; Lave & Wenger, 2005).

These insights helped to identify a **fourth design criterion for arts learning design**:

- facilitate scaffolded learning.

4.4.5 Arts learning is relational

Katz (1998) proposes that people do not simply relate to each other; rather, they relate to or about something: “...relationships have to have content of mutual interest or concern that can provide pretexts and texts for the interaction between them” (p.36). The moment of learning is a social context that provides a point of personal connection, bringing together the learner, their existing understanding, the teacher and their existing understanding, the wider world and the “artefact”. An approach to arts learning that values it as a sociocultural practice embodies meaningful engagement between individuals and concepts that provides opportunities to engage with, enact, and interpret artistic explorations of human experience. This occurs on two levels:

- a) **Interpersonally between learner and teacher, peers, and the wider community**: Social interaction between teacher and learner, learning peers, and the wider community facilitates peer scaffolding and enables the forging of new connections as multiple perspectives are shared (Cornett, 2011). A number of educators thus recommend a student/community-centred approach to education that uses the students’ and a community’s sociocultural values and beliefs when planning and implementing art curricula (Daniel et al., 2006; Dinham, 2017; Katz, 1998; Rinaldi, 1998).
- b) **Via engagement with the cultural constructions of other cultures**: The role of the teacher is that of a mediator of culture and social engagement, presenting perspectives derived from society and culture with an awareness that cultural

heritage plays an important role in understanding human experience and developing cultural identity. The value the arts as ways of experiencing, understanding, and celebrating history, culture and languages, and a recognition of families and community as partners in education all receive significant attention in the *Australian Curriculum: The Arts* (ACARA, 2017).

As such, the community forms an integral element of the authentic learning environment, stimulating learning where problems and concepts are understood in meaningful contexts (ACARA, 2017; Hall, 2007).

Through this process, the **fifth criterion for arts learning design** was identified. Arts learning should:

- engage with the learner’s community and the wider field of cultural practice.

4.4.6 Focused instruction on arts literacies, or learning tools

As vehicles of communication, the arts are considered semiotic tools that connect individuals, thus contributing to more meaningful sociocultural practice. Across the literature, a clear emphasis on developing “meaningfulness” (Cornett, 2011) or “authenticity” (Dinham, 2017; Ewing, 2010) in arts experiences is evident. Whilst integrated arts learning is recommended, this is coupled with a focus on ensuring the specific knowledge and skills within individual arts disciplines are valued and developed, an approach to arts learning that receives particular attention in the *Australian Curriculum: The Arts* (ACARA, 2017). For example, each arts discipline possesses its own history, and identifies specific elements and principles that are the vehicles of communication used by artists to express and communicate through their respective art form. Visual artists use line, colour, shape, texture, form and value (Dinham, 2017) in informed ways to express and communicate through the visual arts. Dancers use space, time, dynamics and relationships (ACARA, 2017). Meaningful engagement in the arts therefore requires an understanding of such tools in order to facilitate an applied understanding of the arts as a means to express and communicate.

In the Reggio Emilia philosophy and other sociocultural approaches to arts education, art is the chosen medium to represent children’s thinking (Katz, 1998; Malaguzzi,

1998; Rinaldi, 1998). The arts take on additional meaning when employed as vehicles of communication; a way of making learning visible, with focus given to using artistic expression as a means to listen to children and understanding their thinking. Focussed instruction that develops a student's proficiency with artistic tools is therefore a key element of ensuring they have the necessary understandings to work with artistic tools of communication to both explore how other artists have used these tools, and to express themselves through these tools. This equally aligns with sociocultural theory in which learning precedes development, and through which initial instruction is often concerned with sociocultural tools prior to further conceptual learning (Hall, 2007).

In light of these understandings, a **sixth and final design criterion for arts learning was identified**. Arts learning should:

- facilitate formal instruction in the tools of the arts.

4.4.7 Summary of a sociocultural approach to arts education

The above exploration of literature and guidelines from arts educators and researchers identifies the requirements of a learning environment that facilitates arts engagement as a form of sociocultural practice. The following six criteria for creative arts learning experiences were identified:

1. Integrate arts learning across learning domains in situated learning projects;
2. Negotiate learning projects between the teacher and learner;
3. Develop open-ended tasks;
4. Facilitate scaffolded learning;
5. Engage with the learner's community and the wider field of cultural practice; and
6. Facilitate formal instruction in the tools of the arts.

4.5 Sociocultural learning design for online contexts - existing design principles, guidelines and models

Sociocultural learning theory has been proposed as a cogent learning theory to underpin this project's design solution, and has been used to develop understandings of home education and arts learning. I now turn to an examination of four examples of sociocultural learning design for online environments as the third and final dimension relevant to this project.

The process of choosing the models from which to elicit design criteria for this project commenced with a systematic review of a significant number of existing models of online learning design. Throughout this process, I was specifically looking for exemplary models that explicated and justified their application of sociocultural theory in the development and facilitation of the online learning environment. Further, I was seeking relevant parallels that could be drawn between the learning design in various models and the potential design features for this research project as an online arts learning environment for home educators. As such, the recency of each model was considered a less valuable attribute than the various models' engagement with, and application of sociocultural theory. This process of evaluation led to the selection of four models (Hall, 2007; Herrington & Oliver, 2000; Grabinger et al., 2007; Gunawardena et al., 2006). Each of these are now explored, followed by a synthesis of the key commonalities through which I defined criteria for this project's design solution.

4.5.1 Learning design from a sociocultural perspective – a model by Andrea Hall (2007)

Hall (2007) identifies an important distinction between constructivist and sociocultural theory that has relevance and utility for this project's learning design. She asserts that the most popular approach to the design of online learning environments employs a socioconstructivist learning design, which blends aspects of constructivism and sociocultural learning theories. Through an analysis of the key features of constructivist and sociocultural theories, Hall (2007) asserts that constructivist approaches to the design of online learning environments are often an

eclectic approach that leads to incomplete realisation of the key concepts of the sociocultural approach. Her main contention lies in criticisms that constructivist approaches minimise the role of learning tools and of the social environment in the internalisation of learning. She states,

...in the development of socioconstructivist course design ... the social environment has been added to a constructivist approach, but without the sociocultural explanation of the role of the social environment ... Vygotsky's theories have been commonly included as part of the constructivist or socioconstructivist paradigm, not as a learning theory in their own right. (p. 95)

Hall's comparison of sociocultural and constructivist theories highlights both points of resonance and points of contrast between the two. Consistency is identified between constructivist and sociocultural theory in their proposition of learning as an active process during which knowledge is constructed and learning is internalised. A number of distinctions, however, are identified, which she summarises in Table 2. Of particular note in her analysis of the distinction between the two approaches is the focus upon the individual in constructivism, who first acts alone and then interacts with others, as compared to the sociocultural view which asserts that interaction with others mediates the learning which is then internalised.

Table 2 Concept comparisons for Sociocultural and Constructivist Theories (Hall, 2007b)

	Constructivist	Sociocultural
Role of learner	Active	Active
Learning focus	Develop cognitive skills and knowledge	Develop cognitive skills and knowledge
Primary place of learning	In the individual's mind (the social environment is important as well)	In social practices (individual responsibility is important as well)
How learning is initiated	Working on problem solving activities	Pre-teaching, then providing support to mature learners psychological tools in the ZPD
Role of the activity	Drive learning	Increase competency in tool use
Basic Unit	Individual	Individual in social interaction

Tools	Cognitive: Express thinking or decrease cognitive load	Psychological: Mediate learning, and change and form the thinking processes
Authentic environment	An open-ended problem as found in real life	Place where the community uses that knowledge in a problem
Teacher	Ensure the activity is effective and provide another viewpoint	Mediate learning through relationships and analysing tools maturing to identify the ZPD
Role of the social environment	A teaching environment that concerns the teacher more than the learners	To help with learning and cognitive development concerning ZPD and psychological tools

Hall's focus upon explicating sociocultural theory and the way that learning is mediated via the social environment prior to internalisation fits with Vygotsky's law of genetic development: All learning/cultural development occurs at two stages, first interpsychologically, where the learning is encountered socially and mediated via interaction with others in the social world (John-Steiner & Mahn, 1996). Second, intrapsychologically, within the child's own psychological processes. All higher psychological functioning is internalised via social relationships. Vygotsky (1981) describes this as follows,

Every function in the cultural development of the child comes on the stage twice, in two respects; first in the social, later in the psychological, first in relations between people as an interpsychological category, afterwards within the child as an intrapsychological category... All higher psychological functions are internalized relationships of the social kind, and constitute the social structure of personality" (as cited in Valsiner, 1987, p. 67).

Based upon this understanding, Hall proposes six design principles for the design of online sociocultural learning environments. These design principles identify important features of a *sociocultural* learning environment, focussing upon the purpose of learning as enculturation into the field of authentic practice via authentic problems in the learner's ZPD and community. Importantly, she identifies that sociocultural approaches to learning employ *conceptually-based formal teaching that precedes engagement with the social environment*. Hall (2007) states, "...the first step is the

learning of the new signs, symbols and concepts that the learners will use in the new learning context” (p. 100). Thus, by developing proficiency with the tools, learners not only increase their opportunity to learn via these, but simultaneously internalise them, which “modifies the thinking processes and so cognitive development occurs” (p. 100). This emphasis on the role of the social environment prior to the internalisation of new knowledge, and the significance of developing proficiency with learning tools was particularly influential in developing design criteria for the developing draft design principles in this study, which is explored in section 4.5.5.

4.5.2 *WisCom* Instructional design for online communities – a model by Gunawardena et al. (2006)

Gunawardena et al. (2006) have developed an instructional design model for online wisdom communities which they claim is based on socioconstructivist and sociocultural learning theories. Naming this design model, *WisCom*, their instructional design provides a model for online learning environments to build CoPs through transformational learning that builds both individual and collective knowledge. This transformational learning is fostered via three dimensions: The development of a wisdom community, the provision of mentoring support, and knowledge innovation.

The *WisCom* model is community-centred, grounded in the theories of the negotiation of meaning in CoPs (Lave & Wenger, 1991, 1998) and distributed cognition (Salomon, 1993), which maintains that knowledge is not only located at an individual level, but is collectively distributed across social environments. As such, wisdom communities focus primarily on the generation of a social context designed to support the learning process via collaboration in order to become “collectively wise” (Gunawardena et al., 2006, p. 219). As noted in the goal of *WisCom*, they seek to “create a wise community that shares a common mission, engages in reflection and dialogue, believes in mutual trust, respect, and commitment, cares for the common good, and empowers its members” (p. 219). In order to achieve such a community, mentoring is required, whereby persons possessing “wisdom” in relevant knowledge domains support and guide learners through legitimate peripheral participation (Lave & Wenger, 1991), thus also facilitating learning within the Zone of Proximal Development (Lave & Wenger, 2005). Mentoring is facilitated by external “experts”

and also occurs among peers within the learning community. Finally, the *WisCom* model is based upon the end goal of facilitating transformative learning via knowledge innovation through “the purposeful creation, sharing, and preservation of meaningful, socially constructed ideas” (Gunawardena et al., 2006, p. 221). These descriptions sit well with the nature of learning within a family’s CoP according to home education research (Barratt-Peacock, 2003; Thomas, 1998), and the nature of wider CoPs in the home education community (Safran, 2010), highlighting beneficial elements of this online design for home educators. The model presents helpful insights into strategies for using online platforms for the sharing of knowledge within a community.

An important point of contrast is noted when exploring the design recommendations put forth by Gunawardena et al. when compared to Hall’s (2007) learning design. Learning in *WisCom* is established via the introduction of a learning problem, and it is this problem which drives the learning. Based upon understandings regarding the nature of the internalisation of learning explored in the previous section (4.5.1), this is considered incompatible with a sociocultural approach. According to sociocultural theory, mediatory tools first function externally between learner and teacher, and then function internally when the learner uses the tools to communicate and facilitate further cognitive development (Brown et al., 1989). In section 4.4.6, I demonstrated that arts skills and literacies are the “tools of the arts,” and argued that focused instruction to develop proficiency with artistic tools is thus a key element of helping learners develop rich understandings in working meaningfully with these artistic tools. As such, the recommendation in *WisCom* that the learning process be initiated by a learning problem is considered unhelpful for this project’s design, and Hall’s recommendation that learning should include pre-teaching and explicit instruction in mediatory tools was ascertained to be more relevant to the design direction for this project. Nonetheless, all other learning principles recommended by Gunawardena et al. (2006) are considered useful. These focus on the use of learning tools as a means to mediate learning and restructure previously held knowledge structures, and upon mediating learning via relationships in the learner’s ZPD. Thus, Gunawardena et al.’s learning principles are considered valuable in understanding design principles for a sociocultural learning environment, albeit with an understanding that that pre-teaching to support cognitive apprenticeship be included.

4.5.3 Instructional design for sociocultural learning environments – a model by Grabinger et al. (2007)

Grabinger et al. (2007) proposes that sociocultural learning design must underpin modern learning environments in order to develop the key competencies for an “ever changing world”, including critical thinking, problem solving, research and life-long learning skills, which are not effectively developed via traditional, transmission-oriented instructional design. The tenets of sociocultural theory are explicated in contrast to traditional, transmission-oriented instructional design, highlighting the differences between the two approaches, and emphasising the situated, collaborative, authentic nature of learning in a CoP. Table 3 summarises the key differences identified between traditional instructional design and sociocultural learning design according to Grabinger et al (2007), and the descriptions of sociocultural learning design provides useful direction for the development of design principles for this project:

Table 3 Assumptions behind instructional design models (Grabinger et al., 2007)

	Traditional Instructional Design	Sociocultural Learning Design
Assumptions behind design	Learning is a linear process of knowledge and skill acquisition, predicated on clear instructional sequences where learning is broken into smaller, decontextualized units.	Learning occurs as a continual reconstruction of experience within authentic Communities of Practice wherein higher order thinking and problem solving occurs via cognitive apprenticeship with more experienced community members.
Roles of learners and teachers	The teacher determines the learning goals and methods to achieve these. Learners are treated alike and acquire the knowledge from the teacher via passive transmission.	The teacher and learners may set broad goals for learning and work collaboratively to determine methods to achieve specified goals for individual students. Teachers assist learners in problem solving and community participation.
Characteristics of instruction and learning environments	Learning events and environments are decontextualized. Information is transmitted in small, decontextualized chunks and evaluated through knowledge recall.	Learning occurs through interaction with authentic environments and problems in collaboration with the community. Learners participate according to their strengths, weaknesses and aspirations.

		Evaluation is ongoing and constructive for future learning.
Use of Tools	Tools are used by teachers to transmit knowledge and used by learners to participate in decontextualized learning activity. Tools are taught as separate to their context-based use.	Teachers view tools as a means to engage learners with the community. They are used by learners to learn and participate as equals within the Community of Practice.

The many references to constructivist theory throughout Grabinger et al.'s (2007) instructional design demonstrate that a conflation of constructivist theory with sociocultural theory, yet the recommendations in their guidelines demonstrate similar outworkings of theory as suggested by Hall (2007). For example, Grabinger et al. (2007) state that "The learner's experience is the central component in sociocultural design" (p. 6), which contrasts with Hall's (2007) proposition that the social environment – and not the learner – is central to sociocultural learning design. However, Grabinger et al.'s further discussion on the role of the individual reveals that the learner is nevertheless securely situated within the CoP, and that the difference is probably more of a semantic one than a disparity in theoretical underpinnings. They state, "learning comes from the learner's participation in the CoP ... The difference between the authentic CoP and the learning environment is fuzzy – if there is a difference at all" (p. 6).

In line with the sociocultural principles regarding the importance of conceptually-based formal teaching that precedes engagement with the social environment, Grabinger et al.'s (2007) guidelines likewise affirm the place of explicit teaching, traditionally associated with Behaviourist learning approaches, in a sociocultural learning design: "A sociocultural approach does not eliminate the need for other types of learning strategies including mnemonics for memorization, practice for rules, or outlining for organization. However, the learners choose which strategies are applicable to their needs when they need them" (p. 6). Other elements explored in Grabinger et al.'s (2007) guidelines include the place of authentic assessment as ongoing and summative, providing constructive "growth-oriented" information through which students continually evolve and are enculturated into their CoP. As such, their learning design is considered valuable to this project's development of design principles that align with sociocultural learning theory.

4.5.4 Instructional design framework for authentic learning environments – Herrington and Oliver (2000)

Herrington and Oliver's (2000) work identified the characteristics of a situated learning environment and addressed the perceived separation of knowledge from real contexts in formal learning contexts. They assert that when learning and context are separated, learners store information as facts rather than tools and that such knowledge remains "inert". The focus of situated learning is therefore to engage in learning knowledge and skills in "contexts that reflect the way the knowledge will be useful in real life" (Herrington & Oliver, 2000, p. 24). Their work is based upon a number of studies into contextualised learning, including Resnick's "bridging apprenticeships" (1987), and Brown, Collins and Duguid's (1989) theory of situated cognition or situated learning.

A number of critical characteristics of authentic learning environments that facilitate situated learning are therefore identified: the provision of authentic contexts that replicate or reflect the ways that knowledge might be genuinely used; authentic tasks; access to expert performances and process modelling; and the provision of multiple roles and perspectives. Authentic learning environments must also support collaborative knowledge construction and reflection to enable internalisation, promote articulation of tacit knowledge in order to facilitate internalisation, provide coaching and scaffolding to enable learners to work within their ZPD and provide authentic assessment of learning within the authentic tasks.

Herrington and Oliver's (2000) design principles align closely with sociocultural theory by attempting to support or replicate the social process of learning in communities as outlined by Vygotsky (2012/1962) and Lave and Wenger (1991). Whilst criticisms have emerged regarding whether online learning environments can actually claim to provide "authentic situations", Herrington and Oliver (2000) argue that there is increasing acceptance of online environments as acceptable vehicles for the critical characteristics of learning communities. To support this contention, they cite McLellan (1994) who purports that "context can be the actual work setting, a highly realistic or 'virtual' surrogate of the actual work environment, or an anchoring context such as a video or multimedia program" (Herrington and Oliver, 2000, p. 25).

The critical characteristics of authentic learning environments proposed by Herrington and Oliver therefore provide helpful direction for the formation of design principles for this project.

4.5.5 A synthesis of existing design principles for online learning

An examination of the above learning designs founded upon sociocultural principles revealed key commonalities that helped to define the criteria for this project's design solution. These were:

1. Learning must occur in a social environment, which then underpins individual activities that facilitate internalisation of new learning;
2. Mentoring must be a feature of a learning environment, providing less proficient learners access to the guidance and modelling of those with greater competency in the specific learning domain;
3. Learning tasks must be authentic and context-dependent; and
4. Learners must be supported to learn and work within their ZPD.

And, whilst the final recommendation does not appear in all examples, it is nevertheless considered vital to ensuring learning aligns with sociocultural understandings of learning in communities:

5. Developing competency with learning tools precedes further learning development.

This final set of design criteria, developed from existing design principles, represent the third dimension used to refine draft design principles that underpin the design solution for home education via an online learning environment.

4.6 Developing draft design principles for the unique requirements of this project

Sociocultural theory is found to be relevant in explaining how people learn, how people home educate, how the arts are located and most effectively engaged with, and

how online learning can facilitate transformative learning outcomes. Following the identification of criteria emerging from existing design principles and arts education guidelines, I now turn to a synthesis of relevant concepts and recommendations across all three domains that were used to develop draft design principles to guide the development of the initial design solution. This was achieved by identifying recurrent categories across the three domains - home education, arts learning and online learning - which were then refined by aligning relevant design criteria with the identified categories, ensuring that all criteria were met. The draft design principles were generated, and are shown in Table 4 with the corresponding design criteria fulfilled from all three domains.

Table 4 Draft design principles and their fulfilment of design criteria

Proposed draft design principle for learning environment	Criteria fulfilled	Criteria sources
1: Situate learning tasks in the family's CoP	<ul style="list-style-type: none"> • Align with social processes in the family's CoP; • Engage with the learner's community and the wider field of cultural practice • Learning tasks must be authentic and context-dependent; and • Facilitate authentic tasks. 	(ACARA, 2017; Brown et al., 1989; Herrington & Oliver, 2000; Lave & Wenger, 1991; Oliver, 2000). Phase one needs analysis: <i>the promotion of authentic, situated learning approaches</i> (see Appendix A)
2: Integrate arts learning in open-ended projects	<ul style="list-style-type: none"> • Integrate arts learning across learning domains in situated learning projects; • Develop open-ended tasks; and • Facilitate authentic tasks. 	(ACARA, 2017; Ballengee-Morris & Stuhr, 2001; Brown, Collins, & Duguid, 1989; Daniel et al., 2006; Dinham, 2017; Goldberg, 2017; Russell-Bowie, 2015). Phase one needs analysis: <i>strategies to support integrated and interest-led arts learning</i> (see Appendix A)
3: Facilitate socially-driven, negotiated learning projects between parent and learner	<ul style="list-style-type: none"> • Align with social processes in the family's CoP; • Negotiate learning projects between the teacher and learner; • Learning must occur in a social environment, which then underpins individual activities that facilitate internalisation of new learning; and • Mentoring must be a feature of a learning environment, providing less proficient learners access to the guidance and modelling of 	(Barratt-Peacock, 1997; Lave & Wenger, 1991, 1998; Jackson, 2015; Renshaw, 1992; Tenenberg & Knobelsdorf, 2014; Wenger, 1998).

	those with greater competency in the specific learning domain.	
4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts	<ul style="list-style-type: none"> • Promote the development of learning tools in social contexts prior to the internalisation of learning tools through context-specific action; • Facilitate formal instruction in the tools of the arts; and • Developing competency with learning tools precedes further learning development. 	(ACARA, 2017; Brown, Collins, & Duguid, 1989; Cornett, 2011; Dinham, 2017; Hall, 2007; Vygotsky 2012/1962)
5: Provide flexible scaffolding for arts learning	<ul style="list-style-type: none"> • Facilitate scaffolded learning; • Be flexible in order to allow parents/carers to work within the child’s ZPD; • Learners must be supported to learn and work within their ZPD; and • Mentoring must be a feature of a learning environment, providing less proficient learners access to the guidance and modelling of those with greater competency in the specific learning domain. 	(Brown, Collins, & Duguid, 1989; Cornett, 2011; Harding 2011; Lave & Wenger, 1991; Stott, 2011) <i>Phase one needs analysis: the provision of inspiration and guidance for arts engagement ideas in the home education context (see Appendix A)</i>
6: Provide support for parental knowledge and understanding through meaningful collaboration in an online CoP	<ul style="list-style-type: none"> • Learning must occur in a social environment, which then underpins individual activities that facilitate internalisation of new learning; and • Mentoring must be a feature of a learning environment, providing less proficient learners access to the guidance and modelling of those with greater competency in the specific learning domain. 	(Lave & Wenger, 1991, 1998; Renshaw, 1992; Tenenberg & Knobelsdorf, 2014). <i>Phase one needs analysis: a support community to ask questions, share learning, and develop new insights with other home educators; and empowering individuals in their own communities through supporting and promoting arts engagement in local communities (see Appendix A)</i>

Each draft design principle will now be briefly explained.

4.6.1 Draft design principle 1: Situate learning tasks in the family’s CoP

The development of learning materials for home educators to facilitate with their children should enable them to engage their children in tasks that represent challenges in everyday life or real situations within the family’s CoP and provide a connection between the learning and the intended purpose of the learning. Materials should engage home educated children in authentic tasks that have meaning beyond “school work” and that contribute to the wider world of art, meaning-making and sociocultural

practice (Brown et al., 1989; Herrington & Oliver, 2000; Lave & Wenger, 1991; Oliver, 2000).

4.6.2 Draft design principle 2: Integrate arts learning in open-ended projects

Integrated arts learning embeds the arts more meaningfully in the wider scope of sociocultural practice, bringing meaning to arts learning and enriching the wider learning sphere (Ballengee-Morris & Stuhr, 2001; Daniel et al., 2006; Goldberg, 2017; Russell-Bowie, 2015). Genuine arts integration requires tasks that develop enriched understanding in both the arts subject and the related subject area/s; that is, all subjects are understood more richly as a result of integrating the learning. Dinham states,

... if The Arts are integrated well, children's arts knowledge, understanding and capabilities will be developed with as much consideration as that given to developing children's learning in other areas of the curriculum. (Dinham, 2017, p. 43)

In integrated learning, the whole is greater than the sum of the parts.

4.6.3 Draft design principle 3: Facilitate socially-driven, negotiated learning projects between parent and learner

The learning tasks must invite sharing and engaging with other persons to construct richer understandings both as individuals and as a community (Lave & Wenger, 1991, 1998; Renshaw, 1992; Tenenberg & Knobelsdorf, 2014; Wenger, 1998). It must therefore provide opportunities for family and community members to collaborate, negotiate and solve problems via rich interactions. In such learning experiences, the focus is not upon the teacher as the imparter of knowledge to passive learners but upon active learners who are constructing their own knowledge via authentic problems in a collaborative context.

4.6.4 Draft design principle 4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts

Specific instruction in the tools of the arts is key to authentic arts integration (Barton & Baguley, 2014), just as induction into using the tools of any sociocultural practice is required for learners to be competent and move into mature practice (Hall, 2007). This therefore requires parents/carers in consultation with their children to identify the concepts and skills that are important and relevant to be learned, and to plan for the attainment of these concepts and skills first on the social level in collaboration, and then to be internalised through the child’s individual enactment of their developing understanding.

4.6.5 Draft design principle 5: Provide flexible scaffolding for arts learning

Children need to be scaffolded to work within their ZPD, and this can be most appropriately facilitated by an involved parent who is intimately acquainted with the child’s level of development and understanding (Harding, 2011). The design solution must provide flexible support structures that can be tailored by parents/carers to appropriately scaffold their children’s specific needs. Support structures will need to be adaptable such that they are relevant to the many facets represented in individual contexts, including the family’s philosophical approach to education, the child or children’s stage of development, interests, social and cultural world, and learning needs.

4.6.6 Draft design principle 6: Provide support for parental knowledge and understanding through meaningful collaboration in an online CoP

The online learning environment should provide a means for parents/carers to collaboratively construct knowledge and understanding that supports and informs their arts education teaching with their home education practice. Social learning thus precedes individual internalisation of new arts knowledge. Parents/carers will possess

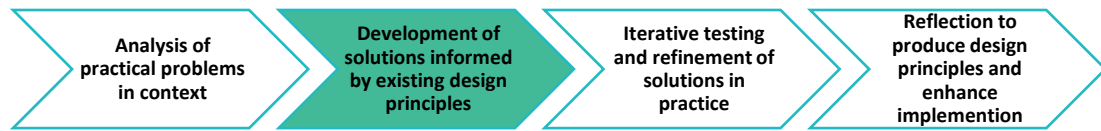
a broad variety of arts knowledge and understanding, and therefore, mentoring processes must be facilitative, providing less proficient learners access to the guidance and modelling of those with greater competency in the arts and home education. However, effective and mutually beneficial collaboration requires a reason for communication; merely providing the tools for collaboration is not sufficient. Building the necessity and impetus into the learning design to engage as a learning community is therefore needed to establish constructive interactions (Lave & Wenger, 1991, 1998; Renshaw, 1992; Tenenbergs & Knobelsdorf, 2014).

4.7 Chapter summary

In this chapter I have explored the development of the project's draft design principles that underpinned the generation of the project's design solution. Given that existing design principles for online arts learning for home education contexts were not found in an exploration of the literature, I approached the development process by examining existing guidelines and exemplary models, in addition to understandings derived through consultation with practitioners, for the three domains relevant to the learning design in this project: home education, arts education, and online learning environments. For each domain, existing guidelines and models for learning design were analysed and design criteria for effective learning design in each domain were developed. The concepts inherent in these design criteria were then analysed and synthesised to formulate the draft design principles for this study.

CHAPTER 5

Development of the prototype design solution



In Chapter 4, I proposed draft design principles for developing a creative arts website and online community for home educators. The draft design principles were developed through an examination of literature, guidelines and existing models of learning design across the three domains relevant to this project: home education, creative arts education, and online learning environments. The unique nature of this project’s online learning environment was identified as operating on two levels; the first level of promoting learning experiences that home educating parents/carers could facilitate as teachers of their children in their individual home contexts, and the second level providing parental support as learners in an online Community of Practice (CoP) that would serve to build upon existing strengths and develop individual and community knowledge and skill in the creative arts.

This chapter details the development of the prototype design solution, which in the context of this project is a creative arts website and online community to meet the specific needs of Australian home educators. In the first section I detail how the prototype design solution – homeiswheretheartis.com.au – was planned and designed in response to Phase One findings, the draft design principles, and an analysis of a selection of existing arts websites for classroom educators. I show how a synthesis of these practical and theoretical understandings informed the development of the prototype design solution and provide information about the choice of online platform, website content and ethical considerations of the study. In the second section, I discuss the process of refining the prototype website via data collected during the Phase Two formative evaluation through a small internet-use survey and three “expert consultations”: email interviews with three academics specialising in home education, creative arts education, and online learning. Their expertise was sought regarding the

prototype design solution, focussing upon best practice in their relevant domain and how further improvements could be made. In response to these data, the prototype website was then refined in preparation for its release to home educating research participants.

5.1 Prototype website development

In this section I detail the practical and theoretical considerations used to plan and design the prototype arts learning environment: homeiswheretheartis.com.au. I begin with an examination of existing arts websites that provide learning materials across all five art subjects as per the *Australian Curriculum: The Arts*, noting how these existing sites do not adequately meet the needs of home educators or this project's draft design principles. Based upon a synthesis of Phase One findings regarding participant needs for an arts support resource, and Phase Two draft design principles, I then show how the prototype arts learning environment was designed.

5.2 An examination of existing arts websites

Through my own investigations into creative arts online resources, and data from home educating participants collected during Phase One of this research project, I had not encountered existing websites that directly met the needs of Australian home educators for arts learning. This did not mean that helpful websites were not encountered, rather no websites were found to be directed at the specific needs of home educators which also engaged with all five arts subjects in the *Australian Curriculum: The Arts*. A number of websites that provided resources and teaching ideas across the creative arts were explored and assessed. I was specifically searching for arts websites produced by reputable organisations or individuals that provided teaching ideas and resources for all art subjects. My search narrowed to include the Australian websites ArtsMMADD.com, ArtsLive.com.au, and ArtsPop.org.au, and American websites YoungArtsMasterClass.org, the Centre for Integrated Arts Education: Arts.unco.edu/art/center-arts-education/, and ArtsEdge.kennedy-center.org. These sites were aimed at classroom teachers, but were appreciated as beneficial, given that many learning tasks for the classroom may be successfully modified in home education contexts. The sites were evaluated according to their perceived benefits and inadequacies for home education arts learning (see Table 5). In order to gain design

direction from each of the previewed websites I further evaluated each one for the elements that fulfilled, or were in contrast to the project’s draft design principles, which then assisted in identifying key elements that might be included or addressed in this project’s arts learning environment.

Table 5 Evaluation of existing creative Arts websites with the needs of home educators

	Description/Benefits	Inadequacies for home educators
ArtsMMADD	<ul style="list-style-type: none"> • Australian website; • Engages with all five arts subjects outlined in the curriculum; • Easy to navigate; • Provides resources for all five art subjects and resources for integration based upon themes and literature; • Visually attractive; • Teaching resources/activities are described clearly and linked to New South Wales syllabus; • One page has “practitioner enquiry groups” but this is not operational; • Provides professional development materials and quizzes. 	<ul style="list-style-type: none"> • Prescriptive resources that cannot easily be integrated with immediate learning in individual homes; • Geared to classroom and larger student numbers; • Resources provide inspiration, but a teacher would need to look through them all to find one that matched student interests, or use them as inspiration to develop their own resources; • Resources not labelled clearly with description; • No active CoP; • Linked to NSW curriculum, not Australian Curriculum.
ArtsLive	<ul style="list-style-type: none"> • Australian website; • Professionally produced website – outstanding production quality; • Provides numerous resources for all five arts subjects – an extensive resource that would provide clear guidance to teachers, especially those lacking confidence in the arts; • Video tutorials provide prescriptive guidance for teachers and are accompanied by worksheets and full lesson ideas; • Resources linked to Australian Curriculum. 	<ul style="list-style-type: none"> • No CoP ; • Prescriptive resources that focus on each art subject individually that cannot easily be integrated with immediate learning in individual homes; • Geared to classroom and resources often only available in schools; • Membership required – only available to registered teachers at approved institutions.

<p style="text-align: center;">ArtsPop PoP: Packages of Practice</p>	<ul style="list-style-type: none"> • Australian website; • Professional and clearly set out website – easy to navigate; • Provides “packages of practice”: a single detailed outline of a high quality learning unit for each art subject as conducted in a classroom, showing curriculum links, a step-by-step outline of the learning, and opportunities for extension; • Provides helpful advice for managing space, time and resources; • Short video documentaries for each unit of learning outline the learning that took place; • The learning experiences provide exemplars of high quality learning in action that could provide inspiration for similar learning experiences. 	<ul style="list-style-type: none"> • The site represents one example of high quality learning in action for each art subject, rather than a series of classroom learning experiences. This approach does not present a variety of ways to engage in arts learning for each art subject; • The learning examples all require larger student numbers and are not suitable for home education contexts; • Although the packages of practice provide insight into examples of negotiated and integrated learning, no scaffolding is provided to assist parents/educators to use these understandings in alternative contexts (other subjects/other expressions of that art subject); • No CoP.
<p style="text-align: center;">YoungArtsMasterClass</p>	<ul style="list-style-type: none"> • American website; • Online curriculum with teacher notes and associated videos for integrating arts learning into history, maths science, and the arts; • Suitable for secondary students; • The site also hosts a teacher network; a space for teachers using the site to share blogs, curriculum planning, videos and resources. 	<ul style="list-style-type: none"> • Static resources that cannot easily be integrated with learning in individual homes; • Does not cover all five art subjects in the Australian Curriculum; • Does not allow for current areas under study in other subjects to be engaged with via the arts.
<p style="text-align: center;">UNCO</p>	<ul style="list-style-type: none"> • American website; • An arts hub that provides links to other helpful teaching resources; • Resources for professional development for classroom teachers; • Useful links to curriculum on other websites; • Background research on integrating the arts. 	<ul style="list-style-type: none"> • Geared for classroom teachers; • linked to US curriculum; • no arts resources, only links to helpful websites; • Likely to be too academic for home educating parents/carers.

ArtsEdge	<ul style="list-style-type: none"> • American website; • Focused on arts-based learning across the curriculum in classrooms; • Helpful search tool that enables educators to search for lesson plans that integrate specific subjects for specific ages; • A “families page”, which provides helpful links and video examples of arts rich learning; • An extensive website. 	<ul style="list-style-type: none"> • Does not represent a central repository for home educators – most lesson plans are classroom-focussed; • No CoP.
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5.2.1 Website evaluation: Situate learning tasks in the family’s CoP

Specific guidelines or resources for situating learning within immediate contexts were not a priority of any of the websites reviewed, although the significance of situating learning in authentic contexts was briefly discussed in a number of sites as an important approach to arts learning (ArtsPop, ArtsEdge, ArtsLive). The vast majority of lesson plans, teaching ideas and resources across all sites tended to represent pre-planned learning experiences that teachers could utilise or adapt within their classrooms. I appreciated how such resources were beneficial to boosting teacher confidence when background knowledge and skills may be lacking, however the provision of prescriptive lesson plans also potentially minimised opportunity to integrate learning with existing student interests or areas of the curriculum currently under study if rigidly followed. Such insights prompted the understanding that prescriptive resources, whilst helpful, must also be accompanied with additional support resources if arts learning was to be genuinely situated in the family’s CoP.

5.2.2 Website evaluation: Integrate arts learning in open-ended projects

A number of websites provided examples of integrated arts learning experiences. The predominant approach taken was the provision of prescriptive lesson plans for integrating arts learning with other subjects in the curriculum. Again, such learning resources could provide valuable guidance for parents/carers lacking confidence in approaching arts learning in an integrated manner, providing demonstrations of quality

integration in action that could be replicated or adapted to their own context. ArtsEdge provided supporting resources on integrating the arts, including a rationale for integration, examples of integration in practice, and support resources such as conferences and links to short magazine-style articles. A very useful search function that permitted users to search for examples of lesson-plans integrating specific subjects for specific age groups was also included, providing scope for teachers to search for examples of integrated learning according to subject or topic. Although such approaches collectively provided a rationale for, and examples of integration in practice, they did not effectively scaffold the process of integrating arts learning such that parents/carers could formulate their own integrated approach based upon their unique context. Evaluation of existing arts websites therefore highlighted the importance of user-friendly access to examples of integration in action in addition to scaffolding to support parents/carers in generating unique integrated learning projects specific to their unique context.

5.2.3 Website evaluation: Facilitate socially-driven, negotiated learning projects between parent and learner

Working with student interests was certainly affirmed as an important process across the arts websites reviewed. However scaffolding resources to facilitate this were not foregrounded. Given that most sites provided prescriptive lesson or unit plans, the focus of the sites tended to be upon providing tangible guidance for teachers that would facilitate meaningful arts learning. Again, I appreciated the importance of providing quality teaching resources as exemplars, but recognised that additional scaffolding to liberate parents/carers beyond a replication of pre-formed lesson templates needed to be provided in order to promote planning of arts learning in negotiation with their children's unique interests in their unique contexts.

5.2.4 Website evaluation: Determine specific learning tools required for the task and provide formal instruction regarding these "tools" of the arts

Prescriptive lesson plans with each of the reviewed websites sometimes included learning on the specific 'tools' of the arts (foundational knowledge, skills, and

techniques in each art form) relevant to that particular lesson or unit. However, this approach did not adequately allow parents/carers and children to negotiate and design learning according to their unique context and then determine the specific arts tools required to stimulate deeper arts learning. Reflection upon this highlighted the significance of scaffolding processes within the design of my own website's learning materials to assist parents/carers in identifying, and then gaining access to relevant resources that could guide their formal instruction in using the 'tools' of the arts.

5.2.5 Website evaluation: Provide flexible scaffolding for arts learning

Each of the reviewed websites was considered to fall short of providing flexible scaffolding for arts learning. Prescriptive lesson plans, useful links, and information on quality arts teaching practices that seemed to be the central feature of most websites reviewed were appreciated as beneficial elements in an arts learning environment that could provide guidance for parents/carers in teaching their children about and through the arts. However, I appreciated that such an approach also required parents/carers to make a "leap" between understanding good arts practice via resources and exemplars and the generation of arts learning specific to their context. I conceived that flexible scaffolding would need to help bridge the gap between the "known" of prescriptive lesson plans, and the "unknown" of learning design for their unique context.

5.2.6 Website evaluation: Provide support for parental knowledge and understanding through meaningful collaboration in an online CoP

Only two of the reviewed websites promoted online facilities for the sharing of ideas, and of these, only one was operational. The ArtsMMADD site provided a page for a teacher enquiry group, however this was not operational due to the lack of participation from educators, which was attributed in part to a lack of frequent facilitation (D. Russell-Bowie, January 19, 2015, personal communication). YoungArtsMasterclasses hosted a teacher network: a platform where teachers could share curricula, information and ideas related to teaching the arts via blogging. This approach was appreciated as a useful sharing platform between educators, but not as an active CoP, given that users did not interact with each other, but merely shared their work for the mutual benefit of other users. Reflection on existing websites highlighted

the need to not only provide a platform that invited sharing of useful arts resources, ideas and information, but also invited collaborative interaction according to shared artefacts which could stimulate further learning for all engaged participants. I additionally recognised the importance of active facilitation as a crucial element to supporting and nurturing participant engagement with the online CoP.

5.2.7 Summary: Key understandings arising from an examination of existing websites

Key reflections arising from an evaluation of the arts websites discussed assisted in providing design direction for my planned arts learning environment for home educators. These reflections have been summarised as follows:

- Prescriptive examples of arts learning in action should be provided in order to scaffold less-confident parents/carers and provide models of quality practice. Video examples and tutorials are especially helpful in illustrating processes;
- A model or framework of integrated arts practice should be developed in order to provide flexible scaffolding that enables parents/carers to move beyond pre-prepared lesson plans to develop learning for their own context;
- A platform for sharing examples of integrated arts learning should be provided, with provision for users to interact with each other regarding these examples, such that meaningful interaction might stimulate deeper learning for all participants. This platform should additionally provide helpful exemplars of integrated learning in practice;
- A forum for the discussion of arts-related teaching ideas or questions should be provided and facilitated regularly in order to stimulate meaningful interaction between participants; and
- A search function should be included to permit users to easily locate content or information relevant to their individual contexts.

These key insights provided tangible direction for the development of homeiswheretheartis.com.au.

5.3 Developing the arts learning environment

Following the identification of specific design requirements through the evaluation of existing arts websites for the needs of home educators, I paused to reconsider key reflections from Phase One (Appendix A), during which I explored the challenges, strengths and needs of home educators with regard to arts teaching and learning. Of particular note in forming the design direction were Phase One findings regarding specified needs of home educators to facilitate a quality arts education, which showed that the arts learning environment should provide:

- a central repository that saves parents/carers time in navigating the plethora of information available on the web;
- support from other home educators who have expertise that can be shared;
- confidence-building resources that provide inspiration or guidance;
- affordable ways of engaging with the arts;
- integrated arts learning that helps make sense of both the arts and other subjects under study, and helps children appreciate the arts as a valuable part of life;
- assistance in meeting Australian Curriculum standards; and
- structure and flexibility such that arts learning may be approached sequentially, yet with the option to apply the learning with flexibility to unique contexts.

Based upon a synthesis of these identified needs, draft design principles and outcomes of the evaluation of existing arts websites, an early model was generated for an arts learning environment. Importantly, this model adopted a two-tiered approach to the design process, based upon the two levels of design principles identified in Chapter 4: learning materials that parents/carers could facilitate with their children, and an online learning environment that delivered these materials and operated as an online CoP. The following matrix was used to develop initial ideas on the practical integration of the specified learning needs and draft design principles:

Specified need:	Relevant draft design principles	Practical implementation of needs and design principles
<p>A central repository that saves parents/carers time in having to navigate the plethora of information available on the web;</p>	<ul style="list-style-type: none"> • 6: Provide support for parental knowledge and understanding through meaningful collaboration in an online CoP. 	<ul style="list-style-type: none"> • An online platform; • Access to a bank of useful arts resources and links that could grow with participant suggestions; • Forums for the discussion of useful resources.
<p>Support from other home educators who have strengths that can be shared;</p>	<ul style="list-style-type: none"> • 6: Provide support for parental knowledge and understanding through meaningful collaboration in an online CoP. 	<ul style="list-style-type: none"> • Forums can provide an opportunity for mentoring between less-confident parents/carers and those who have strengths in specific areas of the arts; • An interactive Gallery can provide an opportunity to share arts learning and provide inspiration and guidance for less-confident participants.
<p>Confidence-building resources that provide inspiration or guidance;</p>	<ul style="list-style-type: none"> • 1: Situate learning tasks in the family’s CoP; • 4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts; • 5: Provide flexible scaffolding for arts learning. 	<ul style="list-style-type: none"> • Flexible learning materials that facilitate situated learning must be teamed with formal instruction in the tools of the arts, such that parents/carers with little background will feel scaffolded in teaching these; • An interactive Gallery can provide examples of arts processes for less confident parents/carers to gain guidance and inspiration.
<p>Affordable ways of engaging with the arts;</p>	<ul style="list-style-type: none"> • 1: Situate learning tasks in the family’s CoP. 	<ul style="list-style-type: none"> • Learning materials must be flexible in order to permit families to make use of

<p>Integrated arts learning that helps make sense of both the arts and other subjects under study, and helps children appreciate the arts as a valuable part of life;</p>	<ul style="list-style-type: none"> • 1: Situate learning tasks in the family’s CoP; • 2: Integrate arts learning in open-ended projects; • 3: Facilitate socially-driven, negotiated learning projects between parent and learner. 	<p>resources that are affordable or at hand.</p> <ul style="list-style-type: none"> • Learning materials must be flexible to permit families to meaningfully negotiate learning with their children and integrate arts learning with other subjects or interests in their home; • Learning materials must present open-ended or inquiry-based learning opportunities.
<p>Assistance in meeting Australian Curriculum standards; and</p>	<ul style="list-style-type: none"> • 4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts; • 6: Provide support for parental knowledge and understanding through meaningful collaboration in an online Community of Practice. 	<ul style="list-style-type: none"> • Curriculum links must be interpreted clearly and simply, and flexibly scaffolded as helpful tools to stimulate deeper arts learning; • Forums can provide opportunity to discuss curriculum issues; • A Gallery can provide insight into how other families have used the curriculum in learning projects.
<p>Structure and flexibility such that arts learning may be approached sequentially, yet with the option to apply the learning with flexibility to unique contexts.</p>	<ul style="list-style-type: none"> • 1: Situate learning tasks in the family’s CoP; • 2: Integrate arts learning in open-ended projects; • 6: Facilitate socially-driven, negotiated learning projects between parent and learner; 	<ul style="list-style-type: none"> • Learning materials must be flexible, enabling learning to relate to the family’s CoP; • Learning materials must provide scaffolded learning for arts-tools; • An opportunity to share families’ arts engagements can be provided through an interactive Gallery and forum discussions. This may provide guidance and inspiration to other families in approaching

	<ul style="list-style-type: none"> • 5: Provide flexible scaffolding for arts learning. • 6: Provide support for parental knowledge and understanding through meaningful collaboration in an online Community of Practice. 	<p>the arts learning in their own context.</p>
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Thus, by considering key issues arising from an evaluation of existing arts websites and relationships between specified participant needs regarding arts learning and the draft design principles, key components of learning materials and a learning environment were developed. The Level 1 learning materials for parents/carers to facilitate with their children would need to provide:

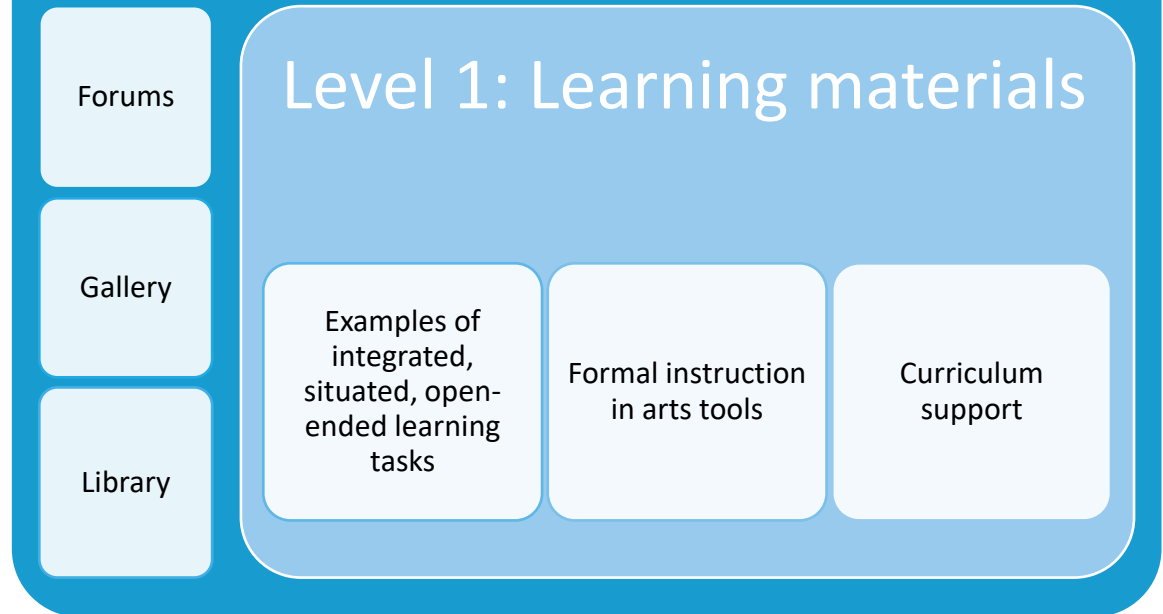
1. Scaffolding for parents/carers to facilitate integrated, situated, open-ended arts learning tasks in individual contexts;
2. Scaffolding for parents/carers to meet Australian Curriculum requirements;
3. Formal instruction in arts tools; and
4. Access to useful arts resources suitable for home education contexts.

The Level Two learning environment that delivered these materials would need to provide:

5. Collaborative tools, such as forums and collaborative Library, for parents/carers to seek and offer support; and
6. A gallery space for families to share examples of their arts engagement.

The following diagram demonstrates initial ideas regarding these key components according to the two-tiered design:

Level 2: Learning Environment



The specific details planned for each element identified in the two levels of the learning design will now be explored.

5.3.1 Level 1 learning design: The development of learning materials

Reflection on existing websites had highlighted that merely providing examples of integrated arts learning tasks failed to meet the design requirement of situated learning in the family's CoP. Further, providing formal instruction in arts tools would need to be tailored to individual contexts, based upon the specific needs and development of the children in each home. I recognised the need to facilitate a scaffolded approach that enabled parents/carers to design learning for their individual contexts. The resultant solution was the development of an Integrated Arts Framework (IAF). This framework was designed to provide a structured but flexible approach for home educating parents/carers to facilitate situated, authentic, integrated and open-ended arts learning tasks in response to their children's interests and needs, and within the child's Zone of Proximal Development (ZPD). An integral aspect of this framework was the provision of access to a range of supporting resources that could scaffold

parental understanding in areas where they may not possess prior arts knowledge. A 6-stage structure was developed (see Figure 3).

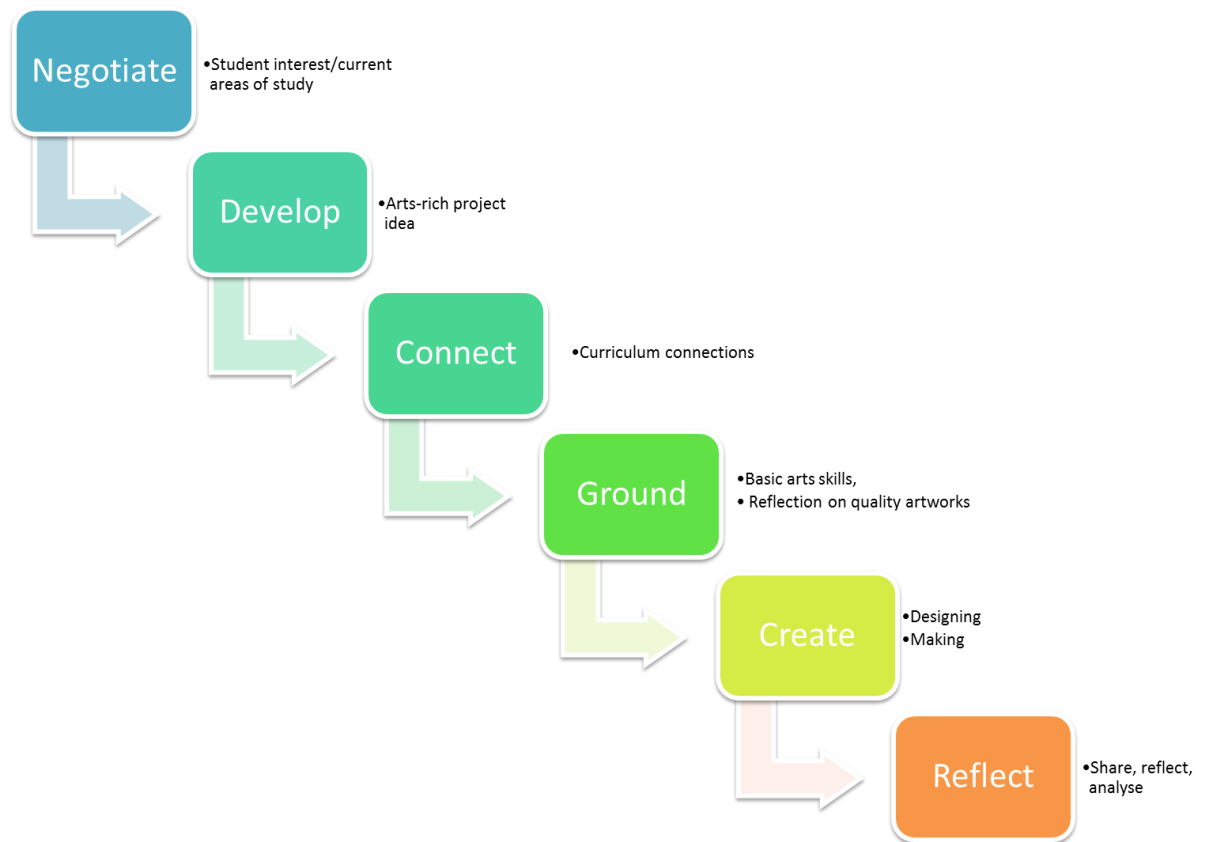


Figure 3 The Integrated Arts Framework (IAF)

Each stage in the IAF is now briefly explored, with reference to how these aspects are informed by draft design principles (see Table 4).

5.3.1.1 Negotiate

In order to develop arts learning that aligns with student interests, relevant areas of learning in other subjects, or events within the family’s CoP, the IAF begins by stimulating negotiation between parent and child on a theme or topic for an arts-rich project. The collaborative identification of these themes, or “Big Ideas” (Jacobs, 1989) provides a starting point for an arts rich unit of learning that enables the integration of a number of subjects according to a larger concept. Big Ideas serve to capture student interest; they value what children already know, and permit them to explore what needs to be investigated further (Cornett, 2011). Following the negotiation of a Big

Idea, key questions are then developed that stimulate inquiry on a level that is developmentally suitable for the child. For example, a Big Idea might be “Circuses” because a circus is currently in town and is of interest to children within the family. Key questions arising from such a broad topic then refine the focus. These might include, “What might it be like to live in a circus community?” or more complex questions such as, “Are circus animals exploited?” The key concepts embedded in these questions reflect students’ prior knowledge, and represent issues that are of personal relevance or significance. The forming of questions invites inquiry, moving students past ready-made answers (Daniel et al., 2006).

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 1: Situate learning tasks in the family’s CoP; and
- Draft design principle 3: Facilitate socially-driven, negotiated learning projects between parent and learner

5.3.1.2 Develop

The chosen concept/Big Idea provides the focal point for an arts rich project. The *Develop* stage guides parents/carers and children through collaborative consideration of potential project ideas that can bring enrichment to learning in both the focal point *and* the creative arts. Importantly, at this point, it is not necessary to know all the details of the potential project, just the artform/s they would like to explore. To scaffold this process, a series of “inspiration boosters” are provided as an important tool to help parents/carers and children choose potential arts project ideas. These inspiration boosters provide a list of potential arts project ideas, suitable for home education contexts, across all five art subjects. The suggested projects are described in a generic manner that allows families to integrate the project ideas with the family’s chosen Big Idea or focal point, and are hyperlinked to useful websites and videos that help to give fuller information about project possibilities. Families may be prompted to choose a project idea based upon the child’s interests, upon a desire to interact with a less-familiar art subject, or upon a natural “match” with their chosen key question, or a combination of the above.

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 2: Integrate arts learning in open-ended projects;
- Draft design principle 3: Facilitate socially-driven, negotiated learning projects between parent and learner; and
- Draft design principle 5: Provide flexible scaffolding for arts learning.

5.3.1.3 Connect

During *Connect* stage, parents/carers are stepped through engagement with the *Australian Curriculum: The Arts Sequence of Content* (ACARA, 2015). This is presented as an optional step, but one that is highly recommended in order to enrich the potential depth of arts learning. Not all home educators focus upon meeting Australian Curriculum requirements; the curriculum is written for schools, and not for home education contexts. However, the curriculum documents provide helpful direction and ideas that serve to enhance arts engagement, and this step in the planning process can also assist families who need to show alignment to the Australian Curriculum for registration purposes. Once a project focus has been selected, the IAF steps parents/carers through a basic engagement with the Arts curriculum *Sequence of Content* (ACARA, 2015). Parents/carers need only consult a limited section of the *Sequence of Content* that is relevant to their children’s developmental level and the chosen art subject in their project focus; a step that I considered helpful in navigating curriculum documents for parents/carers who are unfamiliar with these. Further, approaching the curriculum through the lens of the family’s project idea ensures that learning objectives arise from the family’s sociocultural context, rather than arising from external curriculum documents. Parents/carers are guided through a process of selecting one or two relevant descriptions suitable for their chosen project from the *Sequence of Content*, and are guided to identify key concepts within these descriptions that can inform the following stage of the IAF in which arts tools are explored and developed. Helpful links and examples are provided in this stage of the IAF in order to scaffold parental navigation of the curriculum.

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 1: Situate learning tasks in the family’s CoP;

- Draft design principle 4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts; and
- Draft design principle 5: Provide flexible scaffolding for arts learning.

5.3.1.4 Ground

The *Ground* stage incorporates two important steps: the development of foundational arts skills within the chosen art subject, and the exploration of quality artworks in the chosen art subject. This is an important step in which relevant arts tools are formally explored and developed in order to maintain the integrity of disciplines specific to each arts subject. In addition, arts literacy is developed in conjunction with an understanding of the arts as tools of communication; both key features of developing authentic, meaningful arts learning (Dinham, 2017). A key question that underpins this stage of the IAF is: “What artistic skills, understandings and processes need to be developed in order to engage in the arts project more meaningfully?” The identification of key concepts in the curriculum documents is extremely helpful in identifying these foundational arts literacies and tools, however parents/carers and children may identify further skills and understandings that are required for their selected project in addition to those identified in the curriculum. Scaffolding is provided in this stage for each of the art subjects, with detailed lists of fundamental artistic skills and helpful descriptions provided that enable parents/carers and children to develop greater understanding and competency regarding these important artistic “building blocks”. It was envisaged that these lists would be hyperlinked to useful websites and instructional videos, providing ideas on how to teach and engage with the necessary concepts, skills and processes.

Parents/carers are also advised in this stage to explore examples of quality artworks to inform the creative process, whether it be via the Internet, visiting galleries or attending live performances, where and when possible. Again, this process is scaffolded through the provision of recommended examples of artworks according to genre, and tools for engaging in meaningful reflection. Once users have engaged adequately and meaningfully with the content suitable to their chosen arts-rich project, and explored other examples of quality artwork in this domain, they are guided to revisit their overall project ideas in order to seek opportunities for enrichment

following the grounding stage and its focus on developing deeper understanding of their particular art subjects.

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 1: Situate learning tasks in the family's CoP;
- Draft design principle 4: Determine specific learning tools required for the task and provide formal instruction regarding these "tools" of the arts; and
- Draft design principle 5: Provide flexible scaffolding for arts learning.

5.3.1.5 Create

The *Create* stage is dedicated to providing children with adequate time for planning, designing and creating their artworks, such as a performance, media artwork, visual artwork, musical or movement piece etc. This stage of an arts-rich learning project is largely unstructured and predominantly child-led. Parents/carers are advised to allow unhurried, uninterrupted time for development and creation, and to provide assistance and direction as their child needs it. A vital aspect of this stage is to ensure that learning in both the arts subject and other subject areas has integrity. This means that as children engage in the design and creation of their chosen artwork, they will be simultaneously engaged in an ongoing process of research into related subject areas to inform their artistic explorations.

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 1: Situate learning tasks in the family's CoP; and
- Draft design principle 2: Integrate arts learning in open-ended projects.

5.3.1.6 Reflect

The final *Reflect* stage - in which children and parents/carers collaboratively reflect upon the creative process - is emphasised as a key element of rich learning that should not be overlooked. It is important for children to have the opportunity to share their learning, reflect upon their process of creation and the final artistic product, and

analyse this process/product with reference to wider works of art (ACARA, 2017; Dinham, 2017). This very important process helps each child to understand their own creation in relation to the wider world of art, thus developing a more robust understanding of arts tools and how they can be used for self-expression. Scaffolding tools are again provided for this stage of the IAF, including ways in which artistic products may be shared, such as through the Project Gallery within the arts learning environment; reflective tools; and a template for sharing the details of the family's learning project with other home educating members in homeiswheretheartis.com.au.

This stage of the IAF fulfils aspects of the following draft design principles:

- Draft design principle 3: Facilitate socially-driven, negotiated learning projects between parent and learner; and
- Draft design principle 5: Provide flexible scaffolding for arts learning.

5.3.1.7 Summary of the Integrated Arts Framework (IAF)

The identified stages of integrating the arts were deemed to fulfil the outlined design principles and many of the specified needs of home educators regarding arts learning. It was structured to facilitate situated, integrated arts learning tasks in open-ended projects that are negotiated between parents/carers and children. Parents/carers who may not possess the required arts knowledge and understanding for the facilitation of an arts project are provided with supporting ideas, helpful resources and links to relevant information, which serve to scaffold the facilitation process. Importantly, the IAF could potentially act as a stand-alone resource that is accessed asynchronously and independently by participants; however it was designed as part of a larger, collaborative learning environment. The way in which this learning resource was designed as a flexible and dynamic resource in an online CoP will now be explored.

5.3.2 Level 2 Design: The online learning environment and Community of Practice

Although the IAF was designed according to sociocultural principles in an effort to facilitate situated, integrated arts learning within individual home education contexts, I also recognised that the mere distribution of learning materials in an online context

does not represent genuine sociocultural principles in action. Despite claims of technology enabling “learner-centred pedagogy”, many forms of online instruction conform to traditional, instruction-centred delivery, representing distribution platforms rather than learning environments, and through which learners access content asynchronously and independently (Bijk, Thomassen, & Renger, 2002). In designing the IAF, I focussed upon developing the framework as a dynamic learning tool within an interactive learning environment in order to facilitate transformative arts engagement in both individual home education contexts and the home education community. In numerous places throughout the IAF, hyperlinks and references were made between the framework and the collaborative elements of the online learning environment. These collaborative elements included the forums, Project Gallery, and Library. The attributes of each of these elements will now be discussed.

5.3.2.1 Forums

Forums have formed a substantial element of collaborative online learning environments for some time and are a fundamental tool in facilitating online CoPs (Baxter & Haycock, 2014). I considered their role in homeiswheretheartis.com.au to be essential in supporting the three essential elements as identified by McLoughlin (2002) for supporting learners in online contexts: task support, social support and peer support. The forums were established in order to facilitate dialogue between users regarding their arts learning, and in particular, their use of the IAF. Frequent references and links to the forums through the IAF were included to stimulate these discussions. This effectively provided task support (McLoughlin, 2002): support structures to facilitate the achievement of related tasks. Further, as a social tool, the forums could be used to share arts-related news, such as events and opportunities that may interest participants. Finally, by inviting peer discussion, the forums were considered to be an important tool in stimulating peer support and mentoring. Gunawardena et al. (2006) assert that mentoring should not only occur from external “experts”, but should also occur among peers within the learning community. As such, I recognised the importance of providing a platform for home educators who possessed greater expertise to support and guide other learners through legitimate peripheral participation (Lave & Wenger, 1991).

Importantly, the availability of online communication tools, such as forums, does not guarantee collaboration, or construction of new understanding (Bradley, 2010); participants must have a reason for communication, and it is important to provide interaction not only with other people, but with the content (Bradley, 2010). To this end, references and links to the forums were an important inclusion in the IAF that directed users to the forums and indicated how they could be used to scaffold their understanding and stimulate deeper reflection on the content within the IAF. The intent was to support a dynamic retrieval and exchange of information (Bijk et al., 2002), enabling users to access relevant information, or to ask other users for assistance in locating relevant information. To further support the use of the forums as a means of dynamic retrieval and exchange, a search function was included, allowing users to search for key concepts and terms that may relate to their specific query.

5.3.2.2 Project Gallery

The Project Gallery was initially conceived as a "share space" in which home educating participants could share and celebrate arts engagements with their children, by uploading finished examples of their artworks, including images of artworks, audio files of musical engagement, and video files of media artworks or dance and drama performances. It was believed that a space to celebrate arts engagement would not only encourage ownership and voice in the learning process (McLoughlin, 2002), but also serve as an inspirational platform for other home educators to garner ideas for their own arts teaching. As the design process continued, the Project Gallery was more fully recognised as an important opportunity to foster the process of mentoring and knowledge sharing. To this end, the Project Gallery was expanded to incorporate facilities for families to share multiple files for each arts project, including a guided template that outlined the step-by-step learning process that they engaged in, in addition to examples of their artwork in process and as a final product. Access to examples of arts learning and integration in practice would serve as vital scaffolding for novices in the online community, an important element in developing skill and competence within the CoP (McLoughlin & Oliver, 2000) and stimulating an appreciation of multiple modes of understanding (McLoughlin, 2002). A comments function was also added for each artefact uploaded to a project folder in the gallery, allowing users to discuss the project, ask questions, and guide one another in arts-

specific learning. All conversations within these comments functions were also simultaneously displayed in the website's forums, such that other participants could readily see if a conversation was occurring about a particular project, and easily contribute to this discussion if it was deemed relevant. Finally, a Project Gallery search function was established, allowing users to search for specific topics, concepts or art subjects in the Project Gallery in order to find projects and ideas that may exist in a topic relevant to their own context. The features of the Project Gallery were thus designed to facilitate two elements that McLoughlin (2002) identifies as vital to peer mentoring and scaffolding: *task support* through the provision of exemplars of arts learning in action, and *peer support* through the provision of the comments function within the project folder.

5.3.2.3 Library

The Library page was developed as a central repository for useful external resources and links across all art subjects, and was designed to grow progressively as participants shared existing resources that they had found helpful in their own arts engagements. At the release of the website to home educating participants, the library was therefore relatively sparse, with the intention that participant contributions would build it over time.

5.3.3 Summary of the website design

This section has explored the prototype design of the online arts learning environment: homeiswheretheartis.com.au. I have demonstrated how the design direction was informed by synthesising the findings from an examination of a selection of existing arts websites and Phase One data, in combination with an application of the project's draft design principles. The arts learning environment was designed according to two levels: learning materials for parents/carers to facilitate in their individual contexts (Level 1), within an environment that supported and enhanced arts engagement through an online CoP (Level 2).

5.3.4 Choosing the platform for delivery of the learning environment

Initial plans for the design solution were that it would take the form of an online Moodle site hosted at my institution, the University of Southern Queensland (USQ).

However, certain limitations became apparent as the development process began. The Community Moodle platform that was available to me through USQ was not the most recent version, and consequently lacked some of the more up-to-date features of more recent versions, including aesthetic appeal, which was considered an important feature of an arts-dedicated website. As a Learning Management System (LMS), Moodle did not provide the features of typical websites, meaning that, instead of a series of interlinked, or multi-layered pages which users could navigate according to their needs, learning content and access to collaborative learning tools could only be presented in a linear format, with links to static documents, forums and wikis on a singular page. I considered this to potentially overwhelm home educators who may not be familiar with such a system and may not have the time to learn to interact with a new platform. I also found this format lacked some desirable navigation features; including the ability to incorporate hyperlinks between learning content, learning tools and helpful resources was limited. Further, being hosted through the university meant that potential participants needed to “sign in” to a university website; something that could potentially limit participation by home educators who mistrust institutional authority. Therefore, other options for hosting the arts learning environment were considered.

I began to consider the benefits and limitations of a traditional website. Whilst such a platform would require much more work in the initial setup, and would require the assistance of a website designer proficient in coding, it also offered a number of desirable features. Websites enable greater versatility and aesthetic appeal than a Moodle environment, including the capacity to easily embed video and audio files on a page – an important consideration for an arts learning environment aimed at demonstrating concepts via multi-media platforms. The option to provide “pages within pages”, pop-ups, and hyperlinks was much more in line with the kind of “structured flexibility” I desired that would enable users to access elements of the site as needed, rather than the linear format of Moodle. The website could still be set up as a private, password-protected environment, and offer collaborative features such as forums and private messaging. Most significantly, the scope for participants to be able to easily upload videos, images, audio, and text files directly to the site was considered a vital feature of streamlining file uploads. In order to share video and audio files in Moodle, participants would have to initially upload files to external sites

such as YouTube, and then provide the link to these files using the arts learning environment forums. Roffe (2002) notes that the ease of technology use is an important contributing factor to a successful e-learning environment, therefore this multi-step process for file sharing was considered to be a limitation that may potentially discourage participants from sharing examples of their work. In contrast, a website platform could facilitate a specific gallery which permitted users the ability to upload audio, video, image and text files directly to the private environment, streamlining the process and ensuring that user files were not available to the public. The decision was thus made to choose a website to host the planned learning environment instead of Moodle, and the process of creating the website according to the design outlined above was instigated.

The planned design of the arts learning environment necessitated the employment of a local website designer who worked closely with me to assist with the development of more complex elements of the site, most notably the Level Two elements of the arts learning environment: the Project Gallery and Forums. At this point, I had explored a number of inexpensive and user-friendly website building options, but none permitted the complex capacities required for the Project Gallery and forums. On the advice of the website designer I employed, the decision was made to host the entire arts learning environment over two websites: I would design and create the home page, IAF and Library through a Wix website, whilst the website designer would create the Project Gallery, Forums, and sign up pages on a “sister site” that employed the same design template. Links between the sites would be embedded within each site, enabling users to seamlessly navigate between the two sites without experiencing any sense of changing websites or servers.

This decision to use a website rather than the University’s Moodle LMS greatly improved the site’s visibility and sign up process for potential participants, making it far more accessible. Prior to this decision, I had advertised my proposed research project and website via email and social media to home education contacts, as per the approved ethical protocol. This resulted in 84 interested persons who contacted me in response, asking to be involved in the project; with some expressing great enthusiasm for the idea. Consent forms were then mailed out, which outlined the use of the University’s LMS to all interested persons; however only 14 responses were returned,

despite follow up emails. I recognised the need to present a stronger picture of what would be involved in the arts learning environment, to highlight the potential benefits of being involved as a participant in a more enticing fashion than a consent form, and to streamline the sign up process so that participants could do so by agreeing to the consent process online, rather than via post. Choosing to change from the university's LMS to a website permitted me to create introductory website pages that explained the project in a visually-rich multi-media format. These pages were also easily shared via social media, generating further interest as home educators shared the site with their contacts. Further, the sign-up process was streamlined, allowing interested persons to agree to an informed consent process through the website (see Appendix K). Finally, a small but significant benefit in choosing a website was the ability to choose a catchy domain name, leading to the website's current URL: homeiswheretheartis.com.au. Upon the website's release in January 2015, the decision to move from Moodle to a website proved beneficial, and within two weeks, the site and research had 80 registered participants.

5.4 Refining the prototype website

Prior to the release of homeiswheretheartis.com.au to the home educating public, I refined the prototype website via data collected in a computer usability survey, in order to ensure the website met the computing skill level and access of home educators. This involved an expert consultation process which invited the critical feedback of professionals in each of the fields relevant to the website: arts education, home education and online learning. These will now be discussed.

5.4.1 Computer usability survey

A computer usability survey (see Appendix D), to ascertain the skill level and computing access of participants was conducted. As outlined above in my discussion regarding a choice of online platform, prior to the release of the website to the home educating public, participant recruitment was challenging. I felt it important to conduct the computer usability survey prior to the release date, but had only 14 participants recruited by the time I was ready to conduct the survey, despite follow up emails to other potential participants who had expressed interest in being a part of the project. The survey was therefore distributed to the 14 participants, 11 of whom

responded, and their responses were used to gain insight into ways in which the arts learning environment needed to be adapted and scaffolded to meet specific participant needs.

Overall, the survey revealed useful insights into the ways that participants were using technology as part of their home education practice. In particular, the following key issues that assisted in refining the prototype design solution were identified:

- *Parental confidence levels with technology:* Respondents demonstrated good confidence with technology, accessed it regularly, with most accessing it at least daily, and felt confident with a variety of creative digital tools that would be beneficial for Arts learning and participation in the Project Gallery, such as digital cameras. This suggested that the prototype website aligned with participant technological capabilities.
- *High use of internet-connected mobile devices:* All participants accessed the Internet at home, and many made use of mobile devices, including phone and tablets. In light of this finding, the site was optimised for viewing on mobile devices.
- *Online activity:* All of the respondents used the Internet for browsing and emailing. However, responses varied for other online activity, such as online chat, discussion forums, video streaming and social media. Given that forums were a planned feature of homeiswheretheartis.com.au, this data suggested that not all participants may wish to be, or felt confidence in being, involved with forum discussions. The larger percentage of those engaged in social media, and Facebook in particular, highlighted that existing social media sites should be utilised in conjunction with the website in order to generate greater exposure and keep participants informed of activity within the environment. A closed Facebook group in conjunction with the website was thus created.

The computer usability survey largely confirmed that the small group of participants who had signed up to the project prior to its commencement possessed a variety of technological skill levels, with the majority possessing adequate skills to interact with, and contribute to, the most complex aspects of the website's features. Importantly, all

participants indicated that they were willing to learn new skills, demonstrating that the provision of adequate supporting resources to facilitate the learning of new skills and an active online CoP would be the vital features required to ensure participant engagement with the site's features.

5.4.2 Refining the prototype website: expert consultation

Prior to the release of homeiswheretheartis.com.au to home educating participants, I sought the feedback of three academics through email interviews whose fields of expertise aligned with the three intersecting fields of the arts learning environment: home education, arts education and online learning. These were:

- Professor Deirdre Russel-Bowie: Extensively experienced lecturer, researcher and author in Creative Arts Education - Western Sydney University;
- Dr Glenda Jackson: Educational consultant for the Australian Home Education Advisory Service, Lecturer in the teacher education program at Monash University, home education researcher and author, and former home educator to four children;
- Mr Rod Fogarty: Lecturer, researcher, and author in online learning and teaching strategies for engagement USQ.

Feedback and constructive criticism was sought on a number of key issues, including the ease of use and navigation of the website; the extent to which the arts support resources could meet the needs of a wide variety of parents/carers, especially those with little or no arts experience or confidence; the extent to which the website was likely to facilitate learning that aligned with sociocultural learning theory in individual homes; and specific feedback relating to each specialist's area of expertise. Feedback was largely consistent from all three reviewers, and predominantly only raised minor suggestions for amendment. Key points arising from the expert consultation process are now explored.

5.4.2.1 Suitability of website design: Ease of navigation

Feedback regarding the ease of navigating through the website was positive from all three academics. Simple changes that were suggested included the inclusion of more visually attractive icons or layout in specific places.

5.4.2.2 Suitability of website to home educators

Regarding the website's relevance to home educators and appropriateness in meeting the diverse pedagogical needs of most home educating families, Glenda Jackson (personal communication, January 23, 2015) commented,

...this [website] provides very informed material that is relevant to those interested in developing their children's skills in any of the arts, particularly if they want some form of formality or structure. It also gives those who intend to unschool an idea of the types of topics they could encourage interest or discussion in ... Unschoolers may find some of the things on this website a little formal and structured (especially in the subject areas), but it should also provide them with an overview of what is important.

Although it was my hope that the website would be suitable for all home educators, I appreciated that any form of structure, which would be utilised by the majority of home educating families, would also be less appropriate for unschooling families, based upon their philosophical approach to education as non-interventionist. I made the decision to leave the IAF in its current state and utilise data from participant feedback to further refine it in the future, a decision that was affirmed by Jackson's feedback that the learning materials should be evaluated by home educators themselves, given that data from home educating participants would be more valuable in determining the suitability of the website to their needs (personal communication, January 23, 2015).

5.4.2.3 Suitability of website for arts learning

Feedback on arts-specific elements of the website affirmed that the prototype website provided a "sound balance of practical examples and activities, ideas, resources, weblinks, etc." Further, "Each art form is seen in its own right, but also seen as an important part of the integration process" (D. Russel-Bowie, personal communication, January 20, 2015). Rod Fogarty commented that "As a non-art person, I found the materials provided for each area of arts in each section very helpful" (personal communication, January 19, 2015). Feedback regarding the perceived success of linking the learning materials to the Australian Curriculum was also positive. Arts specialist, Deirdre Russel-Bowie, approved of the manner in which I had simplified

the curriculum documents which would “give care givers a sound understanding of the basics of the curriculum” (personal communication, January 20, 2015), and of my approach which promoted that the curriculum be used as a helpful framework for learning as compared to an inflexible blueprint. Glenda Jackson also noted that benefit these materials would have for home educating registration purposes: “For those parents/carers in states where they are required to write programs for inspection, this is a fantastic resource covering the basics of anything they may need to understand and present in their programs”. It was suggested by both home education and arts experts that the learning materials were overly wordy, provoking my revision of these materials in order to simplify. Additional images were also included in the text-rich section in order to visually “break up the text” and make the written materials more visually appealing.

5.4.2.4 Suitability of online pedagogy employed

Finally, the pedagogical approach utilised throughout the website met the approval from the online learning specialist, Rod Fogarty, who believed that the learning materials and learning environment both aligned with sociocultural learning theory and had the potential to promote a helpful CoP. He noted, “the framework provides a good structure for parents/carers to build learning activities with their children. In terms of sociocultural context, yes, it would fulfil this goal. This is achieved through shared negotiation of the topic, based on the child’s interests, the surroundings or what is happening in their lives or families at the time... The notion of sharing comes through quite strongly” (personal communication, January 19, 2015). Jackson likewise noted the potential for the arts learning environment to stimulate positive collaborations, “The interactive nature of the site and the encouragement for students to publish work and interact with others has huge potential socially and to encourage sharing of ideas” (personal communication, January 23, 2015). Both specialists referred to the importance of facilitation of the learning environment for collaborative potential to be realised, affirming that the key was not the resources, but how they were supported and facilitated.

5.4.2.5 Suitability of the Reflect stage of the integrated arts framework

One specific element raised for enhancement via the consultation process, was the need for greater scaffolding during the *Reflect* stage of the IAF. Fogarty felt this needed greater support in order to facilitate the higher-order nature of reflection. He stated, “I think that the Reflect stage needs to be fleshed out a little more. This is probably the most important aspect and what you have written in that section reflects this, but I am not sure the higher order nature of this and the double loop learning that could take place because of it is strongly enough supported” (personal communication, January 19, 2015). This feedback prompted me to seek existing reflective models that may be adapted to the home education environment in order to facilitate double loop learning (see Argyris & Schön, 1974), in which improvement in learning practices could be facilitated by a deeper evaluation of attitudes and values underpinning learning. Whilst a number of models for double loop learning exist, I found that some were overly complex or difficult to facilitate for home educators if they did not fully comprehend the underpinning theory of double loop learning. I chose an adaptation of Gibbs’ (1988) reflective learning cycle (see Figure 4); a popular model of a reflection that engages in descriptive retelling of the learning event, through which the event is assessed, analysed, evaluated, and used to inform future action (Regmi, 2009). It was also simple to use, making it suitable for younger learners and facilitation in home education contexts; and I deemed it suitable in stimulating action-oriented reflection. It was therefore added to the *Reflection* page of the website as a recommended reflective activity, with brief accompanying notes to aid deeper understanding of each step in the cycle.

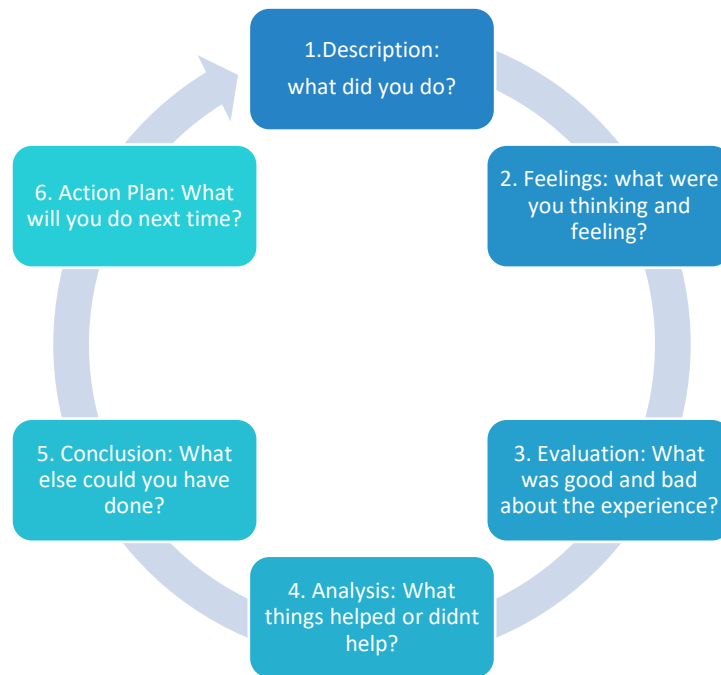


Figure 4 Reflective cycle adapted from Gibbs' (1988)

5.4.2.6 Suitability of the Project Gallery design

Feedback on the Project Gallery, which at the time of conducting the Expert Consultation process was simply entitled “Gallery”, indicated that this element of the website required more substantial amendments. Primarily, its purpose was not clear. The term “Gallery” suggested that this platform merely acted as a space for families to share examples of their artwork. However, as explored previously in my discussion of developing the Project Gallery, this fell short of the full intent for this section of the arts learning environment as a space where users could share examples of arts integration in practice through outlining their approach to integrated arts learning, and sharing examples of their artwork both in process and as a final product. Based upon her extensive experience with home educators, Jackson (personal communication, January 23, 2015) affirmed the website’s “huge potential socially ... to encourage sharing of ideas”, however also commented “My experience so far though is that many home educated students are so independent of other’s opinions they often don’t see the need to share work.” This reinforced to me the significance of ensuring that participants understood the Gallery as more than a space to share finished artworks if they were to see the benefit of contributing to this space. To this end, the gallery was renamed the “Project Gallery”, which was hoped to more accurately communicate the broader intention for this element of the arts learning environment as a space in which

families could mentor each other through the sharing of experience, and facilitate inspiration and guidance for other families. More specific references to the Project Gallery and how it could be used were also made throughout the IAF. These references clarified its purpose, encouraging users to share brief outlines of the process they engaged in throughout their arts learning, thus generating mutual benefit for others in the home education community. Finally, a comments function was added to each artwork loaded in the project Gallery. This function enabled participants to comment on, or ask questions about the uploaded artworks or project examples, ensuring that the Project Gallery was not merely a repository for project ideas, but a dynamic and interactive space where mentoring could take place. These comments functions were linked to the forum space, meaning that a conversation on an artwork would also appear in the forums thus opening the conversation to all participants. Other comments arising from the expert consultation regarding the project Gallery focused upon the need for video tutorials in using the Gallery space, which were consequently created and uploaded.

5.4.2.7 Summary of expert consultation

The expert consultation process was an excellent opportunity to refine the website prior to its release to home educating participants. It provided an opportunity to evaluate my design decisions, based upon the draft design principles from the perspective of experts in the relevant fields of home education, arts education, and online learning. The feedback was predominantly positive, affirming the design direction and foundational draft design principles. Importantly, expert feedback raised a number of key areas for the website's refinement. These included minor areas regarding the navigation and aesthetic elements of the website, and more importantly led to the improvement of the Reflect stage of the IAF, and a more user-friendly and streamlined Project Gallery. In response to the data gathered through the expert consultation process, I finalised the website in preparation for its release to the home educating public.

5.5 Website release – Alpha cycle

The prototype website was developed from the project's draft design principles, and then refined through expert consultations, resulting in the Alpha design cycle of

homeiswheretheartis.com.au. As demonstrated in the site map (see Figure 5), the prototype website operated in two parts: Section A was open to the public, and represented an overview of the website features and the informed consent process (see Appendix K) for participation in the research project. The purpose of Section A was to inform home educators of the various website features, and the benefits of being involved as a research participant. Interested persons could then gain full access to Section B of the website, which contained the learning materials and collaborative learning environments, by agreeing to the informed consent process. To minimise confusion in navigating the website, Section A was no longer accessible once users signed in, meaning that the two sections were navigated independently of each other.

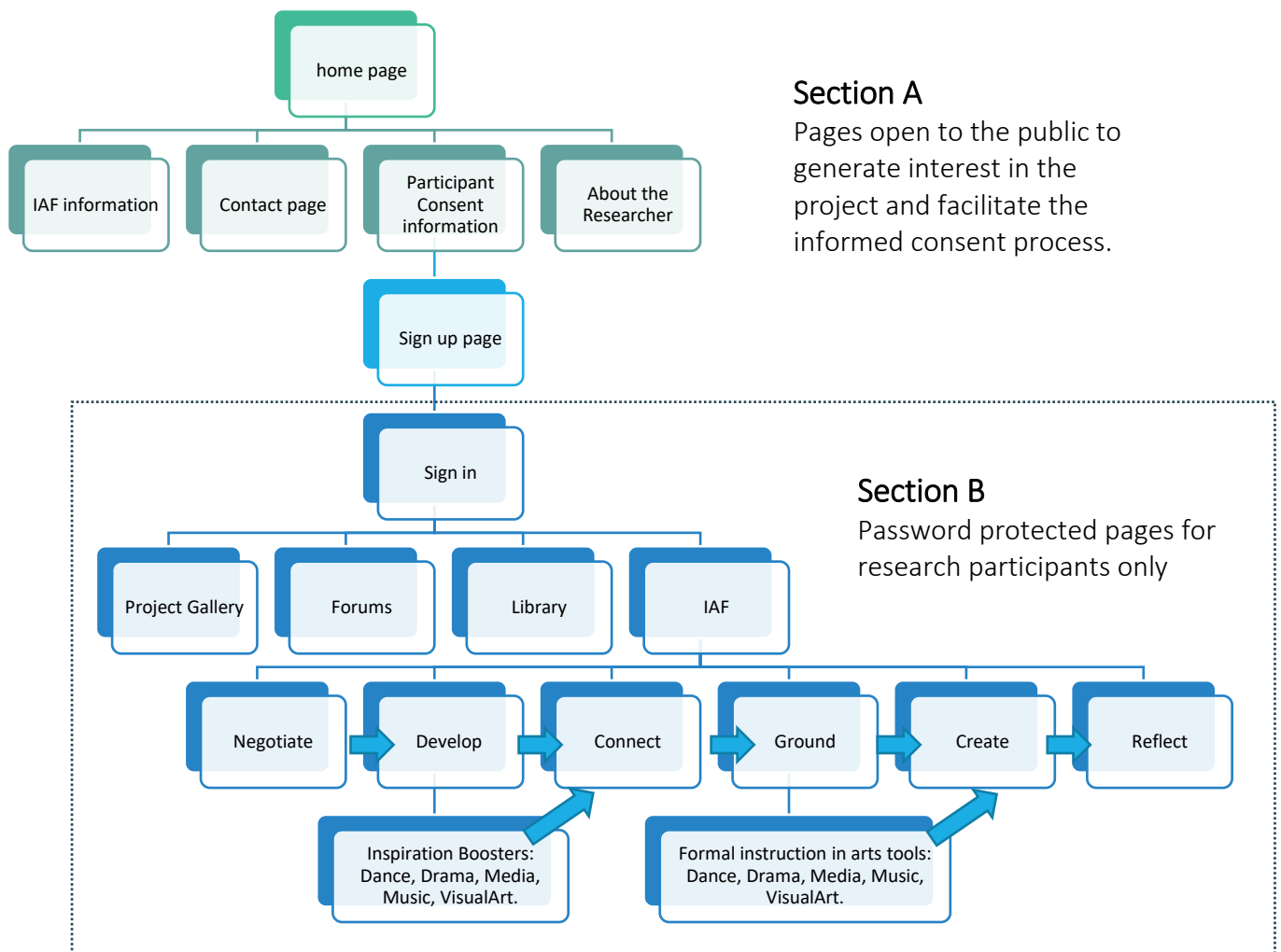


Figure 5 Prototype site map

The release date for the website was set to coincide with the commencement of the 2015 school year. Whilst it was appreciated that home educators do not necessarily conform to the Australian school calendar, it was nevertheless considered a positive and appropriate date that worked well with my existing research timeline and aligned with some home educating families' calendars for the start of their school year. A week prior to release, I created and uploaded a short, [introductory video to YouTube](#) which communicated the story behind the website, its features, and the research that would be conducted through the site. This was intended to generate interest in the research in a manner that was easily shared via social media and email. On the release date, I shared a link to homeiswheretheartis.com.au via email with my existing home educating contacts, and a number of home education Facebook groups. Within two weeks, over 80 participants had signed up.

5.6 Summary

This chapter has demonstrated how the project's prototype design solution: homeiswheretheartis.com.au, was developed. An exploration of a number of existing arts websites, and an evaluation of their relevance and shortcomings for home educators was conducted, demonstrating that there was a genuine need for a home-education-specific website. By synthesising the project's draft design principles with this evaluation of existing arts websites and an understanding of the needs of home educators as elicited in Phase One of this project, a prototype website was generated. Homeiswheretheartis.com.au was then refined in response to a computer usability survey and expert consultation process in order to ensure the site met the requirements of quality learning across the three relevant domains of arts learning, online pedagogy and home education. Following refinement in response to expert consultation, the site was then readied for release to home education participants for Phase Three, which presents the Effectiveness Evaluation: iterative testing and refinement of the research.

CHAPTER 6

Effectiveness evaluation – Alpha cycle



The first cycle of evaluation and refinement of homeiswheretheartis.com.au

In Chapters 4 and 5 I outlined the project’s Formative Evaluation: the theoretical and practical design decisions that were used to develop the prototype design of homeiswheretheartis.com.au. Three iterative design phases were planned for the Effectiveness Evaluation, referred to as the Alpha, Beta and Gamma design cycles. The focus of each iteration was to develop understandings into how home educators teach and engage with the Arts, how effectively the website was supporting and facilitating arts learning processes for participants, and specific changes that needed to be made to the arts learning environment in response to emerging findings. The Alpha website was opened to home educating participants at the commencement of the school year in 2015, and was conducted over a period of approximately three months.

In this chapter I detail the findings from the Alpha design cycle and describe how these were used to inform the next iteration of the website in the Beta design cycle. First, I briefly explore the data sources utilised in the Alpha website, highlighting specific challenges that arose and strategies that were developed in response to these challenges. An exploration of emergent findings at the end of the Alpha cycle follows, which is divided into two sections: ways that participants engage their children in arts learning, and findings pertaining to feedback on the website. Implications of these findings are discussed, with design changes proposed and evaluated according to their validity, legitimacy and efficacy (McKenney et al., 2006) before being implemented as updates to the design. I conclude the chapter with an overview of the most significant design changes that help to illustrate the design at the commencement of the Beta cycle.

6.1 Data: sources and challenges

Preparation for the Alpha cycle data collection included the development of an Effectiveness Evaluation (Alpha) anonymous internet survey, a semi-structured interview schedule, and the embedding of Google analytics codes in the website pages to track site frequency. Other forms of data were collected throughout the Alpha cycle via participant engagement with the online learning environment, which included forum posts, uploads to the Project Gallery, personal interactions via email, and a research journal in which I recorded personal reflections and emerging interpretations of the research process. In addition to these pre-established data collection tools, shortly following the release of the website, I opted to run two open webinars which focused upon sharing arts knowledge, inspiring participants in their arts engagements, and developing understanding around authentic integrated arts teaching and learning, and how homeiswheretheartis.com.au could assist. These webinars also provided additional useful data for this study.

A number of challenges emerged throughout the Alpha cycle with regard to data collection. Ninety-one research participants were enrolled in the project at the end of the Alpha cycle, however only 13 surveys were completed, despite efforts to encourage greater participation through a reminder email, the website's forums, daily forum email feed, and the closed Facebook page. Low Survey response rates are a concern for most survey researchers, with response rates steadily declining since the 1950s and with predictions that this decline will continue owing to "survey saturation" (Baruch & Holtom, 2008). However, I considered a return rate of 13/91 (14%) to be particularly low. This raised questions as to the website's efficacy. I questioned whether participants had looked at the site, found it lacking, and simply ceased participation in the project, rather than providing important critical feedback to help shape the website. I therefore turned to site analytics in order to see what engagement with the site had occurred.

Site analytics were considered a valuable means to ascertain site traffic, and to assess which pages in the website were most popular and therefore potentially most useful to participants. However, due to miscommunication, the analytics code was not embedded in the site pages by the web designer I had employed, resulting in the loss

of this valuable data; an error which was only discovered when trying to access the data at the completion of the Alpha cycle. A valuable opportunity was missed which would have assisted in revealing how many participants had actually visited the site, and repeat visits. The error was remedied in order to collect the data for the website's Beta cycle and I contemplated other strategies to gain further understanding of participant engagement.

In order to gain a clearer insight into how many participants still wanted to be part of the research, and to obtain feedback from those who found the website unhelpful to their needs, an email was sent to all participants offering the opportunity to withdraw from the project by filling out a two-question survey that identified the participant's reasons for withdrawal, and their details such that they could be removed from the participant list. Ten participants responded, asking to withdraw, leaving 81 participants still enrolled in the project. A number of apologetic emails were also received in response, stating that they wished to be part of the project, but that time constraints had precluded them from active involvement. Whilst slightly encouraging, this equally meant that the majority of registered participants had provided no discernible data for the Alpha cycle. I therefore recognised the need to approach analysis at the end of the Alpha cycle with caution, looking for emergent patterns and themes, not generalisations. Given that this was the first of three iterations, valuable understandings regarding the research process were continually being developed, and I was grateful for the iterative nature of Design-Based Research (DBR) that would allow me to gain deeper insights through reflection and implementation of the design solution (Barab & Squire, 2004; Cobb et al., 2003). Rich data were still attained throughout the Alpha cycle that helped to highlight how active participants were using the website, how they engaged in arts teaching and learning, and how the website could be amended to better fulfil their needs. I now turn to a discussion of these findings.

6.2 Alpha cycle findings

Through an initial search for particulars, patterns, relationships and themes within individual data sources and then across all data sources, two overarching categories that were deemed useful to inform the next phase of the design solution were

identified: *Approaches to Arts Learning* and *Website Feedback*. The category of *Approaches to Arts Learning*, embodied descriptions and insights pertaining to how participating home educators engaged in Arts teaching and learning which could in turn be used to refine the website to better meet these needs. The second category – *Website Feedback* - embodied descriptions regarding the ways participants were using the website, of benefits they attained through their engagement with it, and of its current limitations which would again be used to refine the website and underpinning design principles.

6.2.1 Approaches to arts teaching and learning

The identification of understandings into how participants engaged with arts teaching and learning was key to developing future iterations of the website. Such understandings arose predominantly through interviews with six participants, providing rich insights into a small number of home educating families, their approaches to home education, to arts teaching and learning strategies, and their use of the website. Importantly, these six families represented a diverse range of educational approaches, with one family identifying as natural learners, three as eclectic, one as using a unit study approach, and one taking a structured approach to their home education practice. Such a spread of approaches gave a satisfactory range of views based in different philosophical approaches.

Through engagement with these interview participants, a number of arts teaching and learning approaches they employed were identified:

- spontaneous and interest-led arts learning;
- resource-inspired arts learning;
- outsourcing;
- harnessing community opportunities;
- collaboration with other families; and
- integrating the arts with other areas of learning.

Importantly, each identified approach was not used exclusively. Families employed a flexible combination of these approaches to arts learning, and their choice of these was found to be shaped by a variety of context-dependent influences, including:

- the parent’s perception of their child's needs;
- the parent’s educational philosophy/approach;
- parental confidence with regard to teaching different art subjects; and
- access to resources and opportunities.

The Alpha cycle data revealed that families tended to employ a flexible number of approaches, often starting with one particular approach, but then employing others in accordance with emerging needs or opportunities in each unique situation. In this way they established a reciprocal relationship between arts learning and the individual contexts in which it was occurring. Such findings reinforced previous research which identifies home education as situated learning in sociocultural practice (Jackson, 2015), and confirmed the relevance of a sociocultural framework for the design of an arts learning environment for home educators. The situated nature of arts learning within participant families and the strategies they used in engaging with the Arts is outlined in Figure 6.

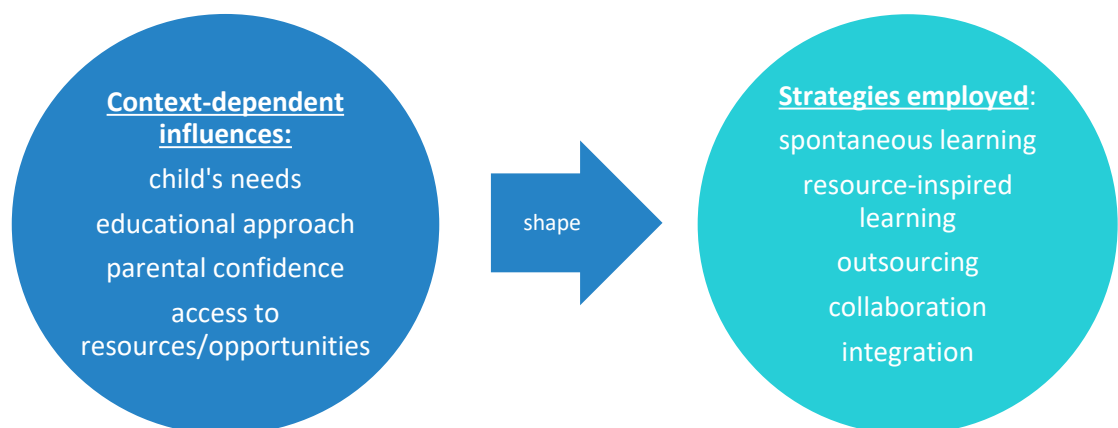


Figure 6 Context-dependent influences and how they inform strategies to engage with arts learning

Each approach to arts learning will now be discussed, with reference to the impact of contextual influences on different educational choices regarding arts teaching and learning.

6.2.1.1 Spontaneous and interest-led learning

An interesting finding across all six interview participants was the consistent reference to tailoring learning to the interests and needs of the child (English, 2015a; Holt, 1967). Whilst the extent and ways in which parents/carers catered to these perceived interests and needs varied considerably, the notion that education should be flexible enough to follow the interests and meet the needs of their children was held by all. For some families, this belief was held so highly that learning episodes were often child initiated, meaning that the child's spontaneous creative activity was encouraged and nurtured through the provision of time and resources, and such engagements were considered to constitute meaningful arts learning by the parent, and intentionally recorded as such for registration reporting. Eve valued the spontaneous creative activity of her three children and recognised the educational value of this in her reporting for registration purposes:

The performing arts they've done just off their own back; turn this into a story and then go and perform it downstairs for Nanna and Papa. And they would be downstairs and you would hear music through the floor and all three [children] are all dancing with Papa. That kind of thing just happens spontaneously. It's not something I even think about. But I certainly write it down and record it. Everything else is probably just left to spontaneous learning. (Eve)

Eve displayed a high level of confidence in her children's natural propensity for arts learning, and such examples of spontaneous play were regularly encouraged in the home, which was shared with her parents-in-law. This approach aligns with the views of Reggio Emilia educators, who acknowledge and provide opportunities to express the expertise that children already possess (Foreman & Fyfe, 1998), and value the notion that "if children can teach their parents anything, it's how to play" (Viney, 2015, October, para 23).

Other families took a slightly more structured approach to valuing the child's interests, such as intentionally harnessing the child's expressed interests through developing negotiated projects in subject areas that embraced these interests. Jean saw significant value in being able to plan learning around the ideas that mattered to her son, Mark:

The big problem I had [with Mark at school] was the content was not a good fit, and it didn't pick their interests either. Mark hated writing at schools. I was told he was lazy. He didn't try. He would just have a meltdown or get upset. And yet now he says he'd like to be an author. And that's because he gets to write about what he wants to write about. (Jean)

In all families, the extent to which parents followed the interests of their children was found to be closely related to the parent's educational philosophy, which aligns with findings from other researchers (Allan & Jackson, 2010; Barratt-Peacock, 1997; English, 2015a; Pattison, 2015). Those identifying more towards the "unschooling" end of the educational spectrum tended to give the children's interests greater voice and greater authority in determining the learning focus and learning activities. Parents who followed a more structured approach tended to plan learning activities, often according to curriculum requirements, and then catered to children's interests through allowing them to choose a specific focus within the pre-prepared learning focus, or allowing them to "pause" from the planned experience to deepen a developing interest. Thus, all families were found to intentionally include their children's unique interests and needs in their approach to arts learning. The extent to which children's interests guided the learning varied according to the parent's philosophical approach.

6.2.1.2 Resource-inspired learning

Existing arts learning resources were used to varying extents by all interview participants as a means to garner inspiration and ideas for arts engagement, or to provide specific arts instruction and learning experiences. Resources included websites and textbooks for classroom teachers that contained specific lesson ideas and unit plans; interactive websites for children that guided learners through specific artistic learning, such as music theory; and a host of websites which provided ideas and printable or downloadable arts activities, often found through social sharing sites such as artist and home educator blogs, Facebook, Pinterest and YouTube. Strong

relationships between a parent's educational approach and the use of resources were not identified. Instead, a clearer relationship was identified between a parent's lack of confidence in teaching a specific arts subject and their employment of resources to help inform their children's learning in that area. This relationship between confidence and a sense of competence in facilitating arts learning was noted amongst participants, and mirrors findings with generalist classroom teachers, where a lack of formal training in some or all of the Arts subjects forms a significant hindrance to a lack of confidence and competence in delivering a quality arts education (Alter, Hays, & O'Hara, 2009a; Donnelly & Wiltshire, 2014). The use of pre-packaged arts teaching resources was thus found by many participants to represent a positive 'way forward' which bolstered confidence and a sense of direction when background knowledge was lacking:

When I first started home schooling I was thinking, I don't really know anything about music. I can't even read music. So, the home education unit, they sent out really brilliant websites and links. One of them was SSFkids.org, which is the San Francisco Symphony Orchestra ...It's got the lines that you write the musical notes on, the staff and everything. And it's all done up like an animated cartoon. And it's got music to it. It was a brilliant website. And when I went through that with the children they were like, 'Wow! We didn't learn this at school!' (Twilight)

Beyond providing confidence, resources were also found to provide parents/carers with inspiration and ideas for engaging their children in varied arts learning opportunities. In fact, most participants were observed to be prolific researchers, often spending personal time each day searching for ideas on the Internet:

I'm printing out things and I'm looking up different websites all the time. (Twilight)

I look at a lot of blogs and I get most of my ideas from blogs and forums. (Eve)

I'll go on the Internet. I'll look at things like Pinterest, and other home schoolers, teachers and Facebook or whatever - just little rabbit trails. And then you'll go, "Well, I can do that like they've incorporated this. I'll give that a

go”, and then you kind of copy other people. So I started off by copying what other people did, then you get more of an understanding and you go, “I could do this.” And you start coming up with your own ideas. (Grace)

As such, resources were extensively sought and used by all participants, with most indicating that resources were flexibly adopted and adapted according to their children’s needs.

6.2.1.3 Outsourcing

Outsourcing refers to lessons or classes in any number of the art subjects through external sources such as private tuition. What was clearly noted was that parents/carers who chose to outsource tended to employ it in areas they felt they lacked confidence, such as Eve, who stated “I’ve got no idea how to teach music. That’s why they went to music lessons.”

For the most part, outsourcing was considered to adequately engage with that particular art subject, meaning that the parent did not feel the need to “cover” that art subject in the home; however for one parent (Twilight) the learning in private lessons naturally “spilled over” into the home environment and helped to extend upon existing and spontaneous creativity in the home.

6.2.1.4 Community opportunities

Community opportunities may arise in a family’s locale, including exhibitions, performances, local competitions (such as the agricultural show) and other arts-related community activities. Parents/carers used such opportunities in a variety of ways, such as a starting point that stimulated further arts engagement, as an enrichment activity that complemented existing arts learning, or even as meaningful arts engagement in its own right. Participants spoke of regular meet ups with other local home educators to explore the arts, visiting art exhibitions and performances, and engaging in parent workshops in the arts. Sometimes, these opportunities were considered an adequate exploration of the particular art subject, meaning the parent did not feel the need to intentionally engage with teaching and learning activities regarding that art subject in the home at that time. For others, these opportunities were used to stimulate an artistic activity, meaning that they inspired the parents/carers or children to further artistic

engagement. For Jean, an upcoming opportunity to visit a theatrical production became the focus of a planned arts unit of learning using the graphic score and soundscape activities in homeiswheretheartis.com.au:

We are planning to travel to Sydney to see Matilda the musical later in the year, with the idea of learning about Tim Minchin as an artist and musician, and I plan to look at ideas such as how Tim's music was influenced by Quentin Blake's illustrations for Roald Dahl's book ... The graphic score and soundscape activity will be a perfect entry to our discussions and research in this area! And I know my son will really enjoy it. (Jean)

Community opportunities were viewed by many interview participants as beneficial enrichments to arts learning, however access to these was highly context-dependent, varying greatly according factors such as geographic location and cost.

6.2.1.5 Collaboration

Collaborating with other home educating families was considered by some participants to be a helpful strategy to not only engaging their children in arts experiences, but also as a means to socialise their children. Two home educating parents, Belle and Eve, and their respective children, met once each week to home school their children together, and usually engaged in Visual Arts during this time. As a university-trained visual artist, Eve's Visual Arts experience and confidence were highly valued by Belle:

It's so much more fun coming here. Splattering paint and clay... we usually do hands-on stuff... Eve is really good at chucking the books to the side and going down a whole other avenue that I haven't thought through yet, or haven't organised myself to do, especially with the Arts side. (Belle)

6.2.1.6 Integrated arts learning

A number of families actively looked for ways to integrate the arts into their existing learning or children's interests, based upon the belief that it made both the Arts and the other subject area more meaningful:

I just found that it makes more sense if art has some sort of meaning, so if we are doing a unit on something, then I will extend it and put like an arts component to it ... So that's when it turns into more of like a unit study approach. So although we try and use the textbooks as a base, we try to do other stuff to make it more fun and like a more wide-ranging and relevant education. (Grace)

But arts integration was not appreciated by all participants. Eve felt that it could sometimes inhibit the wonder of children simply immersing themselves in the artistic process:

I've got a lot of air dry clay at the moment from a shop closing down. I thought, let's just do some clay. And the other day, I went, 'Okay let's try and integrate this to something else we've been learning, um... What can we do?' And you know what – let's just play. So [my children] were just up to their elbows in terracotta clay, and it was just fun. And I think that's what I want them to get out of what they're doing. More than anything, I just want to have fun and enjoy being together and being with me. And from there, if they're interested, there's a lot that they can learn. And I know that they'll want to find out. (Eve)

Interestingly, almost half of the uploaded projects in the website's Project Gallery did not use an integrated approach to their arts learning. Arts integration was initially promoted in the website based upon Phase One findings which suggested that participants valued its potential to make the inclusion of arts in a busy day or week more achievable, and to make learning more creative, dynamic and engaging. Given the centrality of the Integrated Arts Framework (IAF) as a recommended approach in the website to integrating and situating arts learning, this finding raised questions as to the suitability of an emphasis on integration in the website. Whilst integrating the arts was appreciated by some participants, it was not necessarily aligning with the needs or approaches of all. Further, concerns regarding the potential for arts integration practices to be poorly implemented existed. While arts educators affirm that integration is a helpful strategy in a crowded curriculum which also allows students to benefit from rich learning that spans traditional disciplines, there is also the potential for arts learning to be diluted when the arts are used as a tool to explore

another subject area with no opportunity to engage meaningfully with foundational arts skills and knowledge (Dinham, 2017; Russell-Bowie, 2015). The centrality of an integrated approach to arts learning in homeiswheretheartis.com.au was thus reconsidered as an important part of the reflective process embedded in DBR.

6.2.1.7 Summary of Approaches to arts learning

The Alpha cycle findings regarding participant approaches to arts learning revealed that families engaged in arts experiences using a variety of strategies, and that these were influenced by specific aspects in individual contexts. All families indicated that their children's interests and needs were an important aspect of the educational process, with some considering these as foundational to their arts learning approaches. Such findings reinforce the situated nature of learning in home education contexts (Barratt-Peacock, 1997; Harding, 2011), and the suitability of a sociocultural framework in designing learning for home educators. Equally, all participants indicated the centrality of useful resources in informing their arts education practice, although the ways that resources were used varied, and was dependant on a number of context-specific factors. This finding highlighted the need to ascertain more specific insight into the kinds of resources that parents/carers had used to support previous arts learning, and what features they found most helpful as a means to direct the development of resources for the website. Most significantly, whilst some families actively sought opportunities to integrate arts learning, it was not found to be a preferred strategy for all which raised questions regarding the appropriateness of emphasising an integrated approach to arts learning in homeiswheretheartis.com.au.

The following **implications for next phase of research and development** were identified:

- Ascertain more specific insight into the kinds of resources that parents/carers have used to support previous arts learning and what features of the website are found most helpful for them;
- Maintain flexibility in the website's approach to arts learning, particularly regarding the IAF; and

- Foreground access to the individual art subjects for those who wish to simply approach arts learning in that manner, rather than through the IAF.

6.2.2 Website Feedback

Useful findings regarding how participants engaged with the website were revealed within all data sources: the survey, interviews, participant website artefacts, participant emails, and webinar interactions. Specifically, these findings were divided into three categories,

1. *Website use*: insights into how participants were using the website;
2. *Website benefits*: elements of the website that were considered beneficial; and
3. *Website improvements*: aspects of the website that were not meeting participant needs, or specific suggestions for improvement.

Within each category, an inductive thematic analysis process was undertaken with data grouped according to emergent themes. This process resulted in the following codes under three categories in Table 6.

Table 6 Categories and codes related to website feedback

Website Use	Website Benefits	Website improvements
<ul style="list-style-type: none"> • Extent of use • Users • Useful website elements • Forum use • Project Gallery 	<ul style="list-style-type: none"> • Depth of arts engagement • Increased Arts appreciation • Inspiration • Flexibility to tailor learning • Increased confidence 	<ul style="list-style-type: none"> • Less complexity • More examples • Quickly accessible resources • Specific improvements

These major categories and the identified codes according to each will now be detailed.

6.2.2.1 Website Use

Data arising from the survey, interviews, forum posts and Project Gallery uploads collectively helped to create a picture of how the website was being used by

participants, the elements of the site that were most useful, and how the website was potentially influencing arts education in the participants' CoPs. Data revealed that participant engagement with the website was far less than I had originally hoped. However, despite the small number of visible active participants, rich insights emerged, and the following codes regarding how the website was used during the Alpha cycle were identified. These helped to identify important implications for the next phase of research and website design regarding the extent of use; users; useful website elements; forum use; and project Gallery use. These are now explored.

6.2.2.1.1 Extent of use

Alpha cycle data revealed that fewer participants than had hoped had engaged meaningfully with the website. Of the thirteen participants who responded to the Alpha survey, seven indicated that they had explored the site in detail or a reasonable amount of detail, with only four of these respondents finding it useful to their arts education (see Figure 7). Encouragingly, those who had engaged more extensively with the site indicated that they found it useful. The remaining six respondents had either not engaged with the site at all, or had done so in little detail.

Answer Choices	Responses
I have signed up but not really looked through the site	15.38% 2
I have quickly glanced over the whole site, but not used any of the materials or ideas	30.77% 4
I have looked through the site in a reasonable amount of detail, but have not used any of the resources or ideas	23.08% 3
I have engaged soundly with the site (or aspects of the site) and have used some of the ideas	15.38% 2
I have engaged soundly with the site (or aspects of the site) and have found the content and ideas helpful to our arts engagement	15.38% 2
Total	13

Figure 7 Participant engagement with the website

Other available data to indicate participant engagement with the website came from the forums, Project Gallery, and webinar attendance. Five participants had posted in the forums, six in the Project Gallery, and thirteen had attended the webinars, which included most of the active participants in the forums or Project Gallery. Such numbers were again lower than hoped, but were not a definitive indication of how many participants had viewed or used the website materials. Unfortunately, given the loss of site statistics for this first phase of the intervention, there was no way to ascertain

how many other “silent” participants had been engaging with the website, reading the forums, and viewing items in the Project Gallery.

Time constraints seemed to be the most significant element detracting from greater site engagement. The reason cited by four of the six survey respondents regarding their low level or non-engagement was lack of time. Feedback from participants who asked to withdraw from the project again highlighted that time constraints were the predominant reason for non-engagement with the website, with seven out of the 10 withdrawals stating that they did not have the time to engage as they had hoped. Other reasons cited included one family who had ceased home educating, one family who were travelling and no longer able to participate, and one family who felt the website did not meet their needs (with no further explanation offered regarding why). These reasons for withdrawal are shown in Table 7. Five apologetic emails from participants who wished to continue with the project again consistently affirmed that time constraints were their reason for non-engagement to that point. Such feedback provided some insight into the low participation rate throughout the Alpha cycle, and generated reflection on strategies that I could employ in future design phases to overcome this challenge.

Table 7 Reasons for withdrawing from the research

Reason for withdrawing	Number
Not enough time	7
No longer home schooling	1
Travelling	1
Website did not meet needs	1
Total	10

6.2.2.1.2 Users - Who is using the site?

The survey and interview data highlighted that participants aligned with a variety of educational approaches. As previously noted, interview participants identified as taking either a structured, eclectic, unit study or unschooling approach. Similarly, survey data showed that respondents approached home education from a variety of philosophical approaches, with two respondents identifying as natural learners or

unschoolers, two respondents identifying with a structured approach, and nine as using an eclectic approach; findings that were consistent with the interview participants. Whilst the interview and survey responses are not representative of participants in the project or the general home educating population, they nonetheless were aligned with the range of educational approaches as identified by English (2012) and other researchers (Allan & Jackson, 2010; Barratt-Peacock, 2003; Morton, 2010). This was therefore found to be a positive indicator that participants from a variety of approaches had engaged with the website.

I was particularly interested in comparing responses to the website according to the parent's educational approach in an attempt to gauge if the website - and more specifically, the IAF - was considered useful for a variety of educational approaches. Feedback from participants who identified with an unschooling/natural learning or structured learning approach were specifically targeted owing to their representing the "extremes" of the spectrum of educational approaches. I surmised that responses from these distinctly different educational approaches would help to highlight the website's appeal or usability according to the educational approach used. When cross checking survey and interview responses from respondents who chose a structured approach to home education, it was found that only one had engaged with the website. Her responses to questions indicated she found all aspects of the website she had engaged with helpful, and those she had viewed, but not used, as useful. Interview feedback from Twilight, who aligns with a structured approach and for whom adherence to the Australian Curriculum is a high priority, valued both the structure of the IAF and the simple and clear inclusion of curriculum links within it. The two survey respondents who selected an unschooling/natural learning approach, both indicated that they found the IAF useful in concept, even though they had not actually used it. Eve, an interview participant who identifies with a natural learning approach felt the IAF could be used to reflect back on her family's learning. Equally, she felt that the steps could enrich future learning activities:

I think perhaps if I was to use the [Integrated Arts] Framework, it might be retrospectively to begin with for a few cool projects we have already done but I think I could really benefit by using it regularly. It might help me find more relevant activities to our current learning topics. (Eve)

Given that the IAF was designed specifically to facilitate situated arts learning in individual contexts and allow parents/carers to approach arts learning according to their educational approach, this feedback - whilst limited - indicated that the IAF was appreciated as useful by unschooling /natural learning parents/carers, and those who used a structured approach. When these responses from both “ends of the educational spectrum” (Croft, 2013) were considered, it was a pleasing indication that the website, and in particular, the IAF, were perceived to be useful for a range of home schooling approaches. Additionally, it appeared to represent a flexible framework that could be adapted to different learning approaches. More data would be required to support this finding, however, it was a helpful insight to affirm that a website that catered to such diverse needs may be an achievable goal.

6.2.2.1.3 Useful website elements:

Survey responses, interview data, forum posts and Project Gallery uploads provided insight into the most useful aspects of the website, and aspects that were possibly not necessary to its aims in facilitating authentic arts learning in home education contexts (see Table 8). Of the eleven survey respondents who had engaged with the website, all had viewed the IAF and Project Gallery. Ten of these eleven respondents indicated that they had used these facilities and found them useful, or that they perceived them as useful even though they had not yet engaged with them. Only six of the respondents indicated the usefulness of the Forums and Library. Seven indicated the usefulness of webinars, and five the usefulness of a Facebook closed group.

Table 8 Participant feedback on useful aspects of the website

	I have not used this or looked at this	I have looked at this but do not think it would be useful to my family	I have looked at this and think it could be useful, even if I have not used it	I have made some use of this	I have used this and found it to be helpful	Total
IAF	0	1	7	1	2	11
Project Gallery	0	1	8	2	0	11
Forums	4	1	4	1	1	11
Library	5	0	5	0	1	11
Webinars	4	0	2	0	5	11
Facebook	6	0	2	1	2	11

Based upon the feedback of the 11 survey respondents who had viewed the website, the Project Gallery and IAF were considered the most useful elements, and this finding was consistent with interview responses. Webinars were indicated as beneficial by all who had engaged in them; perhaps an indication of the value of social support and peer support that was facilitated through this face-to-face medium (McLoughlin, 2002). There was less indication as to the usefulness of Forums in the survey, and only two of the interview participants had engaged with these. It was suggested by Eve in interview that – with so many social platforms available – another forum platform may easily be overlooked, preventing regular engagement. Nonetheless, their significance in facilitating communication between members in an online CoP was affirmed by interview responses as an essential inclusion in a collaborative environment that promoted beneficial exchanges between community participants. Equally, the Facebook group, whilst only used by a small number of respondents, was considered an important means to stimulate social presence, especially with the significant number of participants signed up to it which might contribute to increasing engagement with all aspects of the site. The continuing use of the Library was, however, brought into question, given that it was not a necessary element of the online CoP, Project Gallery or IAF, and further data would be used to determine whether it continued as part of the website.

6.2.2.1.4 Forum Use

The number of participant forum posts during the Alpha cycle was 24, and these were posted by a total of five participants. Table 9 outlines the different motivations for participant forum posts, and highlights that the forums had been used in a manner quite different to my initial expectations. There was limited sharing of ideas evident, and most forum posts were written to comment on the projects that other users had uploaded, or in response to my own posts in which I initiated a conversation to which users responded. I had anticipated that users might post a question asking if others had ideas on how to approach a particular aspect of arts learning, however the use of the forums as a space to problem-solve regarding arts-specific concepts was not evident. Jean, an interview participant, provided some insight into potential reasons

behind the low engagement with forums as a place to ask questions, suggesting that the fear of asking a stupid question could be off-putting:

It's easier to answer a question than to post a question... To actually flick your question in [an established thread or discussion], rather than having it as a formal question that sits up there... It feels like putting a stupid question in neon lights at the top of the forum. (Jean)

Grace's comments on the forum demonstrated that the purpose of the forums was not overly clear:

I think it's set out well, it's just not very active... I don't know if maybe people are unsure what type of discussions or things should be happening there. I kind of get the impression that people don't really know; is it social or bounce ideas off each other, or whether this art thing is on, or whether what you are doing for Easter or maybe ideas of what they're going to do? (Grace)

Table 9 Participant forum posts (not including posts by researcher)

Post Type	Number of forum posts
Starting a thread to share information	3
Starting a thread to ask a question re: website functionality	1
Responding to a question posted by another user the forums	1
Commenting on an upload or asking a question about an upload	9
Responding to a question I have posted	10
Total Forum Posts	24
Total number of forum participants	5

Such feedback indicated a need to revise forum facilitation and generate increased social interaction through the initiation of relaxed, art-specific conversations to give participants an opportunity to insert any questions into an existing conversation, and to model the potential for forums to be used as a place to engage in collaborative

problem-solving. However, a number of participants indicated that helpful discussions were already taking place in other sites that were more readily used on a daily basis. Jean commented, “a lot of forum things that happen now occur on closed Facebook groups. Probably a lot of different home schoolers are interacting on so many different home school groups”.

The use of existing platforms that were more open to many facets of home education was affirmed by Eve, who stated, “I visit Aussie home school forums (aussiehomeschool.com.au) every day; sometimes many times a day”.

Such feedback raised questions as to whether the homeiswheretheartis.com.au forums were a necessary space to facilitate arts-rich conversations, or whether home educators found that these conversations were already taking place in online locations that served a variety of needs, rather than just an arts focus. I reflected on whether having “another website” to interact with may seem unnecessary if such needs were fulfilled elsewhere. Whilst I recognised the function of the forum as important to have in a collaborative learning environment in providing a platform for sharing of ideas and information, I reflected on how homeiswheretheartis.com.au could best meet the needs of home educators, and sit with, or in addition to their current engagement with other online platforms. More specific research focus into this issue would need to be conducted in future iterations of the design.

6.2.2.1.5 Project Gallery use

At the end of the Alpha cycle, a total of 18 projects had been uploaded to the Project Gallery, which included seven of my own, and eleven uploads from six different participants. Each participant upload to the Project Gallery was evaluated according to whether the learning represented an authentic arts learning experience, and whether resources from homeiswheretheartis.com.au had been used at any stage throughout the project. To be deemed an example of authentic arts learning, the project needed to provide one or more of the following opportunities:

- development of arts skills and techniques specific to that art subject;
- engagement with the wider world of artistic endeavour through viewing and/or reflecting on other relevant art works;

- using an art form as a means of self-expression.

An overview of this evaluation is presented in Table 10.

Table 10 Overview of Alpha Project Gallery uploads

Upload	Description	Authentic Arts?	Resources from homeis-whereheartis
Acrylic printing	Used natural materials found in a specific environment to express the difference between biotic and abiotic factors	Yes	IAF Rule of thirds
ANZAC lap book	Lap book for exploring Anzac day and traditions, including recipes for Anzac biscuits, two-up instructions, information on Aboriginal diggers, important quotes	No	Not evident
Easter Eggs!	Making Easter baskets as gifts was turned into a rich learning project by exploring the history of Easter eggs and visual composition	Yes	IAF Composition basics
Cloud Jars	Colour mixing exercise using water, food colouring and shaving cream. Discussions relating to the process of rain in clouds made some connections to Scientific learning	Yes	Not evident
Incey Wincey	Turing a nursery rhyme into a photographic story, editing and then adding music	Yes	Photographic story materials
Interviews	Video interviews. Children needed to ask questions and determine interviewing skills, camera skills and editing skills	Yes	Not evident
Prime Ministers	Game cards uploaded of photos of Australia's Prime Ministers and then names/details.	No	
Doll's Bedroom	Craft project – creating a doll's room out of recycled and new materials	Somewhat	Retold using IAF, arts techniques not adequately developed
Natural Dyes	Using natural dyes to dye eggs	Somewhat	Not evident
Mosaic Easter Eggs	Creating Mosaic Easter Eggs using small tiles and Styrofoam eggs.	Somewhat	Not evident

The Alpha cycle project uploads highlighted a variety of approaches to arts learning with varied use and application of the resources in the website. Two participants evidently used and applied the IAF with intent and depth, and a third had used it to describe the approach taken in their learning, although lacked evidence of providing opportunities to develop key arts skills and techniques. There was also some evidence of project ideas and arts skills and techniques taken from the website within a small number of projects as shown in Table 10. Other families had used the Project Gallery as a space to share learning experiences their family had engaged in; however, there was no apparent use of resources or ideas from homeiswheretheartis.com.au. Their uploads were nonetheless appreciated as positive engagement with the intent of the website by other participants as a sharing platform for the mutual benefit of home educators, as an online Community of Practice (CoP), and to establish user confidence in sharing arts explorations.

Analysis of these uploads identified two key ideas for future iterations of the website. First, a clear propensity to share visual art and media arts learning was noted, prompting reflection on how the website could be refined to better support and stimulate learning in Dance, Drama and Music. Further, whilst some projects demonstrated meaningful and authentic integration, where arts skills and knowledge were deepened in addition to enriching learning in another subject area, other projects demonstrated more of a “handmaiden” approach (Dinham, 2017) or what Russell-Bowie (2015) terms “symmetric correlation,” wherein arts learning supported learning in another subject without developing arts knowledge and understanding. This raised questions regarding strategies to scaffold genuine integration and authentic arts engagement in future phases of the website.

6.2.2.1.6 Summary of Website use

Analysis of participant use of the website through the Alpha cycle revealed useful insights into the website’s use, however the limitation of these findings must be acknowledged. The website had not been used as extensively as hoped, and not all registered research participants had contributed data. Time constraints appeared to be the predominant factor preventing more extensive interaction, which prompted

reflection on strategies to promote greater engagement with the online community in the successive design phase, and resources that might be helpful to time-poor home educators. Whilst only a small number of participants had actively contributed to the online community, they represented a range of educational approaches, providing early indications that a website that met the diverse needs of home educators may be an attainable design goal. Finally, Project Gallery uploads demonstrated that for some families, an enhanced understanding of, and engagement in, authentic arts practices was evident; however, this was not apparent in all cases, and strategies to enhance authentic practices were considered. Importantly, this included the identified need to provide additional support for Dance, Drama and Music learning, which were not shared in the Project Gallery.

The following **implications for next phase of research and development** were identified:

- Develop strategies to increase active participation in the website;
- Investigate whether participation in the website's online community yields greater benefits to an individual's arts engagement;
- Ascertain if participants desire access to an online CoP to support their Arts engagement;
- Ascertain implications on Arts teaching and learning when parents/carers feel time constraints are tight and identify the types of resources they identify as useful when time is limited;
- Develop strategies and resources to develop participant understanding of, and engagement in authentic arts practices and authentic arts integration;
- Develop strategies and resources to stimulate engagement in Dance, Drama and Music;
- Correctly embed website analytics to track site traffic; and
- Evaluate the necessity of the Library page.

6.2.2.2 Website Benefits

Data from the survey, interviews, and participant emails provided insight into a number of benefits that participants identified as a result of their engagement with this research project through the Alpha cycle. These were identified as benefits pertaining to:

- depth of arts engagement;
- increased arts appreciation;
- inspiration;
- flexibility to tailor learning; and
- increased confidence.

These identified benefits were helpful indicators of ways in which the website was useful to home educators, and of specific ways in which the parent/carer needs in facilitating an arts education were being fulfilled. This contributed to the identification of successful design features that should be maintained in future iterations of the project.

6.2.2.2.1 Depth of arts engagement

For some participants, engagement with the website had discernibly facilitated a deeper, or more authentic approach to their arts engagement whereby use of the website had stimulated an awareness of opportunities and strategies to deepen arts learning. Prior to the participation in this research project, Natalie identified that her approach to arts learning lacked depth. She stated, “I don't think learning - as in education - was happening, as in ‘the elements’ and whatnot. It was just: "oh isn't this lovely!" ... the creative process.” Given my emphasis on stimulating authentic arts learning experiences, this was encouraging. Engagement with the research project and website helped Natalie to identify opportunities for deeper engagement with a Visual Arts printing project with her daughter. She recalled,

Instead of me going, okay go for it! We sat down and talked about the plan...we actually sat down and she told me, and I did a bit of an outline and then we got the bigger page and she worked out where she was going to put everything and it was a matter of, "Well what do you think would make a good print for bark? What about this coral? ... What colour would you like?" "Well I really like gold" It was totally different. [In the past] we would do nature prints, do painting; it was totally different to how I would go about it normally. (Natalie)

One survey respondent experienced a similar insight into opportunities to deepen arts learning and make genuine curriculum connections by applying the steps of the IAF:

So far I have taken one of our planned arts activities and used the Arts Project Template on the site to develop more structure and depth to our activity. We have moved from simply acting out a play to making masks and props for the play as well. We have researched mask making, talked about what he has learned in his formal Drama classes, and how he will apply that knowledge to this project, and I have made curriculum connections that I would never have even looked at if not for the help I have received as part of this project. (Respondent #5)

Stimulating authentic arts learning was an important aim of this research, and these results show that – for some participants – engagement with the website had brought more purpose and authenticity to their practice. However, analysis of some uploads to the Project Gallery and interviews also highlighted that for others, arts learning was still not representative of “authentic” practices, as explored in the previous analysis of the Project Gallery. I reflected that authentic arts practices may be evident in the website, but may need more overt exploration in order to be understood and scaffolded for all participants.

6.2.2.2.2 Increased Arts appreciation

A number of participants made reference to an enhanced appreciation of the Arts in education as a result of their engagement with the research project. Such comments included the following:

It's made me more aware of [arts learning], and kind of focusing on how important it is... It's good, because sometimes it does get busy and you do go Maths, English, Science and then maybe will do [art] next week, but by having that constant reminder, it does make sure that you do balance it out and that you do give it equal time and opportunity with the rest of the curriculum. (Grace)

I think I have been more enthused, like having a tonic! (Respondent #3)

This development of arts appreciation was a valued emerging outcome, and particularly its potential to stimulate more authentic arts engagement in home educating contexts. Whether increased appreciation actually translated into more intentional arts engagement was not clear, and further research would need to be conducted if such claims were to be made. I noted that most positive references to engagement with the project and its stimulation of arts appreciation tended to be associated with interpersonal aspects of the research such as the webinars or in-person meetings, rather than with the website alone. This suggested that personal interaction was highly valued in enhancing arts appreciation, and aligned with research findings into the value of collaborative learning in online learning environments (Garrison, Anderson, & Archer, 2000; Gunawardena et al., 2006; Oliver, 2000).

6.2.2.2.3 Inspiration

A number of participants referred to their appreciation of the website in providing ideas and inspiration for arts engagement, and for helping them to approach arts learning in more inventive ways. In reference to a Dance project I had uploaded, Twilight stated:

[I] probably wouldn't even think of acting like tadpoles and transforming into a frog. Or you know, the caterpillar into the butterfly. We might have done that in a text, diagrams and things like that, but to do it through Dance— which is something my children are passionate about—to go, “hey let's be creative let's pretend that we are doing this”, I found that really interesting. It's helping me to think outside the square of just traditional dance. (Twilight)

In an email, Grace shared the way that she had been inspired by her engagement in homeiswheretheartis.com.au for a Media Arts learning unit:

I really like the way you have the website laid out. I was looking at your bit on photography and thinking that would work well to design your own unit study. Just design a lesson or lessons around each element that you describe and discuss. This is the type of thing I have been looking for for some of the media/technology type art subject. (Grace)

Responses that referred to gaining inspiration from the website were considered a positive emerging outcome, especially given that the majority of participants indicated they were seeking inspiration when they joined. This was identified in both the Phase One: Needs Assessment survey (see Appendix A), and again in the Alpha cycle survey, in which 8 out of the 13 responses (61.5%) indicated participants were looking for ideas, inspiration, support or resources to help their children engage with the arts. However, given that references to finding inspiration from the website arose from a small percentage of enrolled participants, this finding could not be generalised across all the participants. Further data from a wider range of participants was required and strategies to enhance participant engagement with the research were considered.

6.2.2.2.4 Flexibility to tailor learning

The ability to tailor a website to a diverse range of pedagogical approaches was one of the most significant challenges I encountered during the design process. Both survey and interview data demonstrated that participants from a variety of educational approaches found the website, and in particular, the IAF, flexible enough to provide helpful guidance according to their unique educational approach. Twilight, who identified as preferring a structured approach to home education stated,

I like the structure ... Like, with the Integrated Arts Framework, how it's saying, this is what is important, or necessary for children to learn according to the Australian Curriculum, whether you want to be home schooled or unschooled... I'm thinking this is really good, because it's going to give me an easy flow of steps, to accomplish what I want to do. (Twilight)

Geminy, who aligned with an unschooling approach equally found aspects of the website helpful, stating, “I really liked the project template & hope that will be a really useful tool.” And a survey respondent who identified as taking an eclectic approach to home education stated in the Alpha cycle survey, “I know I will consistently keep coming back to this framework. I love the structure and simplicity of it and it helps me to feel confident that I am keeping on track with where I want to go” (Respondent #5). Such comments were representative of general participant feedback, however one survey respondent found the website and IAF overly complex. Thus, I appreciated that the approach I had used in developing the website possessed positive features that provided flexibility for a variety of educational approaches, and that further simplification would only enhance the website’s usefulness for a wider range of participants.

6.2.2.2.5 Increased confidence

A positive feature of engagement with the website that was identified through survey, interview, and email data was an increase in confidence with regard to arts teaching and learning. Interview participant, Jean, who had been home educating for just under twelve months, found her engagement with the research and website particularly beneficial in boosting her confidence. This pertained not only to increased confidence in engaging her son in meaningful, curriculum linked arts learning, but also in being able to discuss her home educating practice with others, including her state’s home education authority through whom she was registered.

I feel like I can talk to people now ... they are curious and they will ask what are you doing? And it’s so easy to say, ‘They are 70% of the way through grade 5 Khan Academy Maths and he is halfway through the Maths Online which is Australian Curriculum grade 5 Maths’, so they are very solid benchmarks of where he is up to and how well he is doing... Art has always been very hard to justify or to talk about. It’s nice to say that we’ve managed to link this into this part of the curriculum ... And I like that we can link it back to the curriculum and actually feel like he’s getting an arts education not just a bit of an ad hoc... and I feel like, once I’ve filled [the IAF template] in, I’ve got something that – if I need to hand something in to the home education unit, I’ve got validation. (Jean)

Similarly, Natalie referred to the confidence she had gained through her involvement, especially with reference to reporting on her child's learning, stating, "I don't really care too much about curriculum but in saying that, when I go to put in my report, that (referring to the arts website and Integrated Arts Framework) can assist me".

Survey respondents further highlighted increases in participant confidence:

I like the detailed overview when planning activities, especially if I'm unsure how to go about a certain project. (Respondent #1)

It helps me to feel confident that I am keeping on track with where I want to go. (Respondent #5)

Importantly, references to an increase in confidence were correlated with participants who had indicated that they had engaged soundly with the website in the survey or in interviews. Whilst other potential explanations for the link between increased engagement and increased confidence for survey participants may have existed, such as general personal confidence, the overt link between engagement and confidence expressed by interview participants suggested that the website could positively impact confidence with facilitating arts learning. This again raised questions as to the development of strategies to increase participant engagement and to develop a site that could be readily understood and useful without requiring a good deal of time to understand how to implement the concepts and tools throughout.

6.2.2.2.6 Summary of Website benefits

The benefits that participants identified as a result of their engagement with the website and research were encouraging, and provided helpful insights into aspects of the website design that should be retained for further evaluation and improvement. Most significantly, the identification that the website could potentially provide helpful guidance to families employing a variety of educational approaches was encouraging. Participant identification regarding increasing depth in arts learning, development of arts appreciation and the facilitation of arts learning was also positive. However, the small number of participants who had provided this feedback meant that such findings could not be generalised. Greater participant engagement with the website and data collection tools were a necessary focus in the next iteration of the design phase. Given

the positive feedback regarding webinars and in-person meetings in stimulating some of the website's benefits, the need for greater interpersonal engagement was recognised.

The following **implication for next phase of research and development** was identified:

- Consider ways to increase opportunities for synchronous, interpersonal engagement.

6.2.2.3 Website improvements

Data from the Alpha cycle survey, interviews, and participant emails regarding their engagement with the website revealed important insights into preferences and needs that were not currently being met by the Alpha cycle website for supporting arts engagement. Feedback pertaining to potential improvements were found to centre on the following key themes. Participants desired less complexity; more examples; quickly-accessible resources; and specific improvements. Details regarding each of these are now explored.

6.2.2.3.1 Less complexity

Although a good deal of participant feedback referred to aspects of the website that they found useful, there were equally aspects of the website that participants found overly complex. Only one participant expressed overt negativity toward the website, but such feedback was considered valuable for the potential improvements that could be made in response to this feedback: I do not have the time to add this to my schedule. The things I did look at didn't really inspire me and looked more complicated than I thought was necessary (Respondent #8).

This feedback suggested there was scope for the website to be presented in a less complex, and more inspiring or accessible fashion. Additional feedback from other participants helped to provide more tangible guidance as to how the website could be presented in a less-complex manner, showing that a less wordy and less formal environment would be more accessible and inviting:

There was a lot of information to take in, and there were a lot of words. I tend to skim through and skip. There wasn't very much jumping out at me. But then, I'm quite a visual person. And I also don't enjoy reading anything on the Internet. (Eve)

Reduce content rich information to a paragraph with a drop down "read more" comment for those interested in that section. (Respondent #1)

A key aspect that was raised by four of the five interview participants was the 'teacher speak' they felt was utilised throughout in the website; that is, a number of comments on the at-times overly formal, educational discourse was noted. Whilst these were chosen as a means to summarise concepts concisely, I appreciated how such discourse could be alienating, and even reminiscent of institutional authority and educational regulation of which some families are suspicious (Allan & Jackson, 2010; Chapman & O'Donoghue, 2000). In particular, the overly formal language in the titles of the various stages of the IAF was mentioned, and a preference expressed for more descriptive, easily-understood language:

Someone who is only in their second year [of home educating] might look at that and go 'I don't understand it. It's still too much teacher-speak' Just looking at [the IAF] where you've got Negotiate, Develop, Connect... That's your teacher speak. Although it is single words, that can be a little off-putting. (Grace)

Further feedback from participants also highlighted that a less formal approach in both the forums and the choice of wording throughout the website may make it more accessible to a wider range of people. Of the forums, one survey respondent suggested: "Have some starting points to get people more involved, make it a little less formal and slightly more social to encourage engagement by more people" (Respondent #7). This feedback indicated that participants preferred a personable, informal approach to the website and forums, which included less formal language, more graphic images, simplified descriptions and less text throughout.

6.2.2.3.2 More examples and quick-access resources

A frequent point expressed by a number of participants was the desire to see more examples of arts learning in action. Examples of arts lessons and projects were identified as a key aspect of boosting confidence when parents/carers were unsure of how to teach a particular concept or arts subject, and as a means of providing inspiration for learning experiences that may be conducted. Grace stated, “If you did have more examples, that might give us a little bit more confidence to go ‘oh I could do that. I’ll have a go at that’...” Similarly, Natalie acknowledged, “Examples are probably the first thing I go to... I go for examples neatly summarised.”

A number of participants acknowledged that prescriptive examples could lead to copycat learning, whereby the particular learning activity is copied with little regard for tailoring learning to the family’s context or the interests and needs of the child. However they also acknowledged that the provision of example lessons or projects, in addition to a scaffold for developing learning opportunities such as the IAF, had the potential to provide a helpful means for parents/carers to move from copying existing learning activities to developing their own.

You need the project they can do, but if you go through the [IAF] steps it gives them a bit of a scaffold so that more things that are out there will become more accessible to them. So that if they are looking at blogs or things like that or reading material from the Board of Studies ... more of that would be accessible... Rather than go, ‘I just want to copy’, you eventually want them to be able to understand and interpret and come up with their own. So by providing a kind of halfway point, I think that’s important too. (Grace)

Similar discussions occurred with other participants, highlighting that example lessons and projects provided parents/carers with illustrations of quality arts teaching and learning in action, and enabled parents/carers with less confidence or skill in a particular arts subject the opportunity to engage in meaningful arts learning. However, participants emphasised the importance of providing such examples in a context which also provided a scaffold for parents/carers to develop their own arts teaching and learning according to individual contexts.

However, the provision of more examples in the Project Gallery needed to be approached cautiously, given that too many high-quality examples provided by me as the researcher initially created feeling of inadequacy for some participants in relation to sharing:

I think that's been my biggest thing about feeling unsure - about what is valid to put up [in the Project Gallery]. Especially because the things that you've put up there are so very good. That probably was a bit intimidating to me because they were really good. I really like that they're there. But I felt intimidated to put my own stuff up there - it felt like what I would be putting up there would be quite different. (Jean)

This feedback indicated that too many examples may be counter-productive for the purpose of the Project Gallery as a place to share the arts learning participants had engaged in. However, the varied feedback received indicated that examples could be more effective if presented as a starting point for the development of more tailored learning to individual contexts. This would better reflect the scaffolding processes within the learner's Zone of Proximal Development (ZPD) recommended in sociocultural theory, which works to support in a manner that increases the learner's confidence (Lave & Wenger, 2005). It was clear that too many "polished products" (Parker, 2015) in the Project Gallery, which was the parents' space for sharing examples of their own arts projects, could have the opposite effect and diminish parental confidence. I thus considered that summarised example lessons and project ideas could be embedded throughout the website in conjunction with descriptions of different potential arts activities. Such an approach would therefore provide participants with examples of arts learning without making them feel intimidated in sharing their own arts learning in the Project Gallery.

6.2.2.3.3 Quickly accessible resources

Some participants desired access to ready-made lessons or activities that could be implemented in the home. One participant who asked to withdraw from the project cited the following reason for withdrawal: "Not enough art project ideas/printables that I can quickly download and use."

Interestingly, Eve, who identified with a natural learning approach showed a similar desire to have examples that could be printed out and easily implemented:

If I get onto the website, if there's something specific I'm looking for, I would want to print it out and bring it with me. Because, we do school [in the kitchen], back deck, front deck, back deck - and I'd like to have the resource, particularly if it is a lesson that I'm thinking about, or an activity, I'd like to have it right there and I can read through it while I'm doing it. (Eve)

Such an approach was not common to all participants, with Jean showing a dislike for prescriptive learning and a strong desire to tailor it to her son's needs. She stated: "Why wouldn't you want to build it yourself? Why would you just want to take something out of the box and, 'oh well, right or wrong, this is what's going to get rolled out'. I mean that's not much different to schools."

Grace approached learning in a similar manner to Jean, but nonetheless recognised that – for some families – a very prescriptive lesson guide can help to establish confidence:

So to me, [the IAF] was a good scaffold to look at and follow. But again, coming back to different types of home schooling, we're very structured and I do it in a very thorough way, whereas a lot of people just want to pick up a book and go off of that because they've got no ideas or they're not quite confident ... I can look at it and go yet that's great, but not everyone out there has that time up their sleeve. (Grace)

This identification of the time and confidence required to tailor learning to children's unique requirements raised questions regarding the place of prescriptive resources in the website. Given the clear identification of time constraints as a major inhibitor for many families in engaging with this project and with arts learning, it was a particularly significant consideration. Further, as identified in the discussion in the previous section, such quick access resources had the potential to provide a foundation for future scaffolded arts learning that would be more significantly grounded in the family's sociocultural context. However, reflection on the design principles and their focus upon facilitating socially-driven, negotiated, open-ended, contextually-relevant

learning projects suggested that prescriptive, quick-access resources were antithetical to a sociocultural approach to learning (Grabinger et al., 2007; Herrington & Oliver, 2000). Thus, analysis of Alpha cycle data on the provision of quick-access, prescriptive arts resources presented questions rather than findings. I questioned whether quick-access resources could stimulate authentic arts engagement, whether they were in alignment with sociocultural principles, or whether alternative strategies to engage in arts learning for time-poor parents/carers could be developed.

6.2.2.3.4 Specific improvements to website functionality

Survey responses, interview data, participant emails and webinar discussions provided avenues for participants to make suggestions regarding specific improvements they would like to see in the website. These suggestions were many and varied, relating to minor formatting changes, to restructuring of pages and ideas for new inclusions. A full list of participant suggestions which informed specific improvements to the website's functionality is provided in Appendix L.

6.2.2.4 Summary of website improvements

Participants indicated that they desired a more streamlined and accessible website that relied less upon text and provided visual/auditory examples of quality arts learning. The desire for prescriptive "ready-access" resources was only expressed by two persons, however reflection upon the time constraints cited by a number of others led to further consideration of how such prescriptive resources might be included in the website in a manner that reflected the principles of a sociocultural approach to learning.

The following **implications for next phase of research and development** were identified:

- Consider ways to simplify the website and minimise the amount of text;
- Include more meaningful graphics that summarise and exemplify concepts;
- Develop strategies to engage community members in the online community through informal, personable approaches;

- Develop or link to more examples of arts learning in action and embed throughout the website;
- Avoid too many examples in the Project Gallery that may serve to intimidate families from sharing their own work; and
- Consider strategies for meeting the needs of time-poor parents/carers in approaching Arts learning that align with sociocultural principles.

6.2.2.5 Summary of website feedback

At the completion of the Alpha cycle, feedback from participants indicated that the first iteration of the website represented a positive start to the design of an online learning environment for arts learning in home education contexts, and that some participants had found it very useful to enhancing their arts teaching and learning. Equally, a number of key issues for amendment were identified, in addition to areas that needed to be focussed on in future iterations of the research and development process. Importantly, low participation rates in the website meant that a more extensive picture of how the website may or may not be meeting the educational needs of a broader group of home educators was not ascertained. Thus, the most critical element for the commencement of the Beta cycle of the website design was the development of strategies to stimulate greater participant engagement with the website. I believed this would then elicit a broader variety of participant feedback to help shape the future of the site and assist it with meeting the needs of a broader sample of home educators.

6.3 Evaluation of proposed changes to learning design

The individual implications arising throughout the Alpha cycle data analysis were collated according to the type of change suggested. These proposed changes were categorised as changes to website functionality and resources; website facilitation, and research goals for the next iteration. The way in which changes were made in response to these categories will now be explored.

6.3.1 Changes to website functionality and resources

An extensive list of proposed changes to the website's functionality and resources were suggested by participants through both survey and interview data, which required further evaluation prior to implementation in order to ensure the changes were achievable and sustainable within the given timeframe and available resources. To facilitate this evaluation process, McKenney et al. (2006) suggest applying three criteria: *viability*, *legitimacy* and *efficacy*, to assess the changes. An intervention's viability refers to how practical the design or change is to implement and sustain. Legitimacy refers to whether the design is established in accordance with established principles and standards. Efficacy evaluates the efficiency of a design change, and includes a focus on whether the time, financial cost and effort involved are going to achieve results worth the investment. McKenney et al. (2006) advise that this evaluation process may necessitate compromise as the researcher balances the project's goals with practical necessity or limitations.

More often than not, a renewed analysis must take place as trade-off decisions are made. For example, a design may prove to be highly legitimate and effective, but not viable (for example too expensive or too time-consuming) in practice. If viability can be achieved, but only with costs to legitimacy or efficacy, then trade-offs must be weighed. Without a balance among these three, implementation will be challenged or possibly fail. (p. 80)

All proposed changes to the Alpha cycle website functionality and resources were thus subject to critical evaluation according to the three criteria of validity, legitimacy and efficacy with regard to the project's aims and available resources to determine if they would be implemented for the Beta design cycle (see Appendix L).

Changes to the website resources included:

- Restructuring the website such that the focus was no longer on the IAF as the central approach to arts learning (Figure 8);
- Removing the Library page and redistributing the library's resources across relevant art subject pages;

- Moving suggestions for integration to a more useful and logical position and hyperlinking to the Project Gallery where applicable (Figure 9);
- Reducing written content where possible by using meaningful graphics to exemplify concepts, or hiding detailed text using a “read more” option (see Figures 9 and 10);
- Renaming the stages of the IAF to make the language more conversational (see Figure 11);
- Providing more examples of arts learning in action throughout the website. Additional examples in the Project Gallery were not included in order to avoid intimidating families from sharing their own work; and
- Developing an alternative project template that permitted a flexible means for families to record their arts projects, regardless of the approach they took.

The following figures illustrate the updates made to homeiswheretheartis.com.au. Figure 8 demonstrates how the IAF was no longer the central features of the website’s approach to arts learning. Figure 9 provides an annotated example of a page from homeiswheretheartis.com.au and highlights the ways that suggestions for integration were embedded. Figure 10 demonstrates the reduction in written content which was replaced by hyperlinked pages and graphic content, and Figure 11 shows the changes to the language of the IAF to make it more conversational.

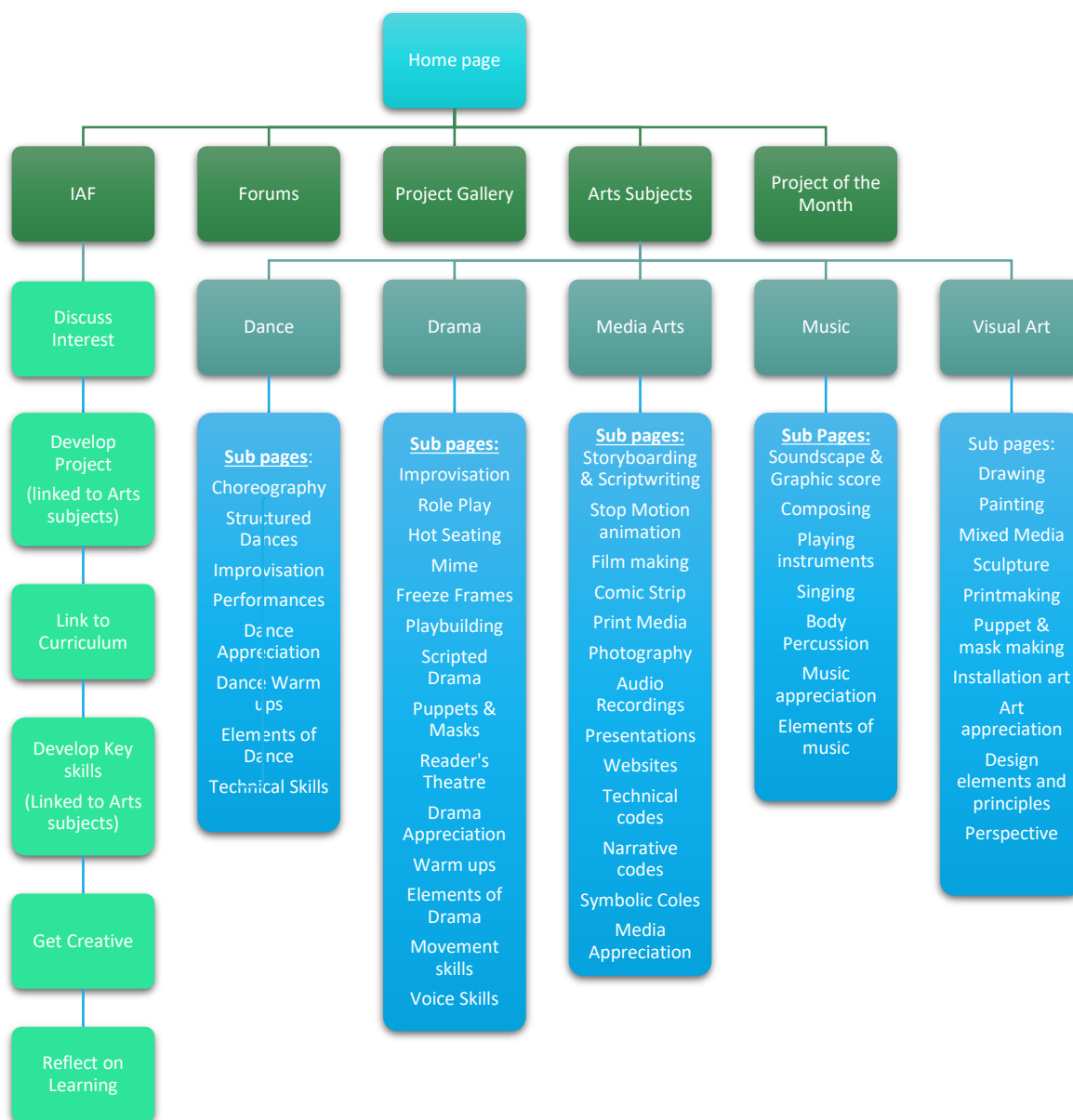


Figure 8 Beta Phase site menu

dance drama media arts music visual art

Stop Motion Animation

Stop motion animation is simply a series of photographs of inanimate objects played in rapid succession in which the objects move in small increments, generating the impression that the objects are moving. It has become increasingly popular with the advent of digital photography which makes the taking of the many hundreds of photographs necessary for the project achievable. With little more than a tripod, digital camera and freely available software, children can make their own stop-motion animations that explore learning that is occurring across the curriculum.

Important strategies for developing stop motion animations:

Try using plasticine, toys, household objects, drawings and paper cutouts, or even yourself in various explorations of this wonderful genre!

It's important to ensure that the important "Devising Key Skills" phase of this integrated arts framework is not overlooked. Encourage your children to focus on the **aesthetic** and **communicative** qualities of their chosen project to ensure that arts learning is occurring. An important step for enhancing their arts learning is to engage them in quality planning and thinking about how they are going to capture their intended meaning, and who their intended audience is. The process of script writing and storyboarding is therefore an essential step you will not want to neglect.

Scriptwriting and Storyboarding

Ideas for integrating Stop Motion Animation with other subjects:
Look for ways you can express concepts, ideas and stories using stop motion projects.

Science -

- Develop a stop motion animation to express your learning in whatever aspect of Science you are currently studying. Try to bring interest and energy to the project through an interesting narrative approach to the Scientific concepts. This stop motion video shows how the scientific concept of pollination is brought to life through a cute narrative.

History -

- Create a script and stop motion feature that provides a recount of an important historical moment.
- Integrate History with English - have your children write a fictional narrative about characters set in the Historical period you are studying.
- Create a stop motion film about a theme that has arisen through your studies, such as democracy, freedom, war.
- Track the movements of the great explorers on a map.

Geography

- Explore foreign lands using stop motion animation. Find images of the location or concept you are studying as the backdrop and use other objects to express a story of the important learning occurring. This example video shows a very basic stop motion used to explain volcanoes.

English

- Bring a short story to life in a stop motion feature
- Re-enact a story using Lego figures
- Write your own story and turn it into a stop motion

Health and Physical Education

- Create a stop motion advertisement for healthy lifestyle issues, such as diet and exercise

Stop Motion Animation

Charlotte George

Brief description of arts activity or project idea

Important strategies to develop techniques and skills

Examples of ways to develop skills and techniques

Ideas for integration with other subjects and accompanying examples

Figure 9 Example activity page where ideas for integration are presented as suggestions only

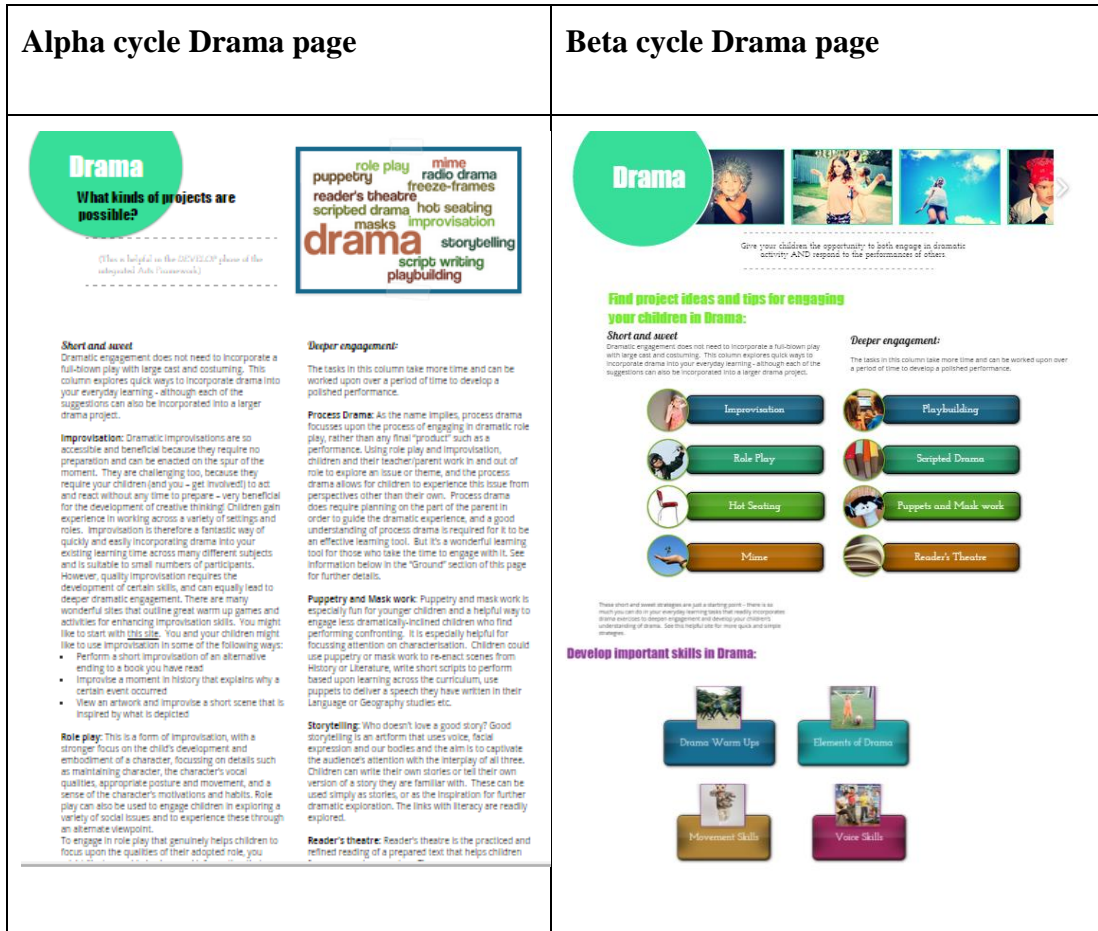


Figure 10 Comparison of individual art subject page between Alpha and Beta design cycles, and reduction of written text

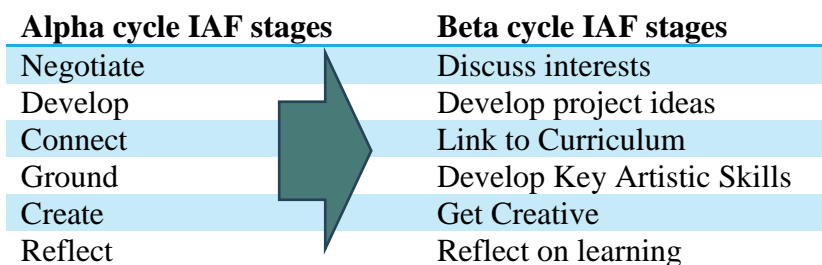


Figure 11 Changes to the IAF language

6.3.2 Changes to website facilitation

Alpha cycle findings revealed a variety of suggestions and goals for improving website facilitation in the Beta cycle. These were:

- Consider ways to increase participant engagement with the collaborative aspects of the website;
- Stimulate a social atmosphere in the Forums by posting questions for relaxed participant interaction;
- Develop strategies and resources to stimulate engagement in those art subjects not yet represented in the Project Gallery: Dance, Drama and Music;
- Develop strategies and resources to develop participant understanding of, and engagement in, authentic arts practices and authentic arts integration; and
- Consider ways to increase opportunities for interpersonal engagement.

These identified suggestions for improvements to the website facilitation needed to be translated into more specific strategies. In addition to understanding how I might increase participant engagement with the collaborative aspects of the website through enhanced facilitation, I needed to develop specific strategies for the Beta design cycle to enhance participant understanding of, and engagement in authentic arts practices, and engagement in Dance, Drama and Music. However, I also fully appreciated that participant engagement with the collaborative aspects of the website had not been proven as vital to enhancing arts engagement in individual contexts. Thus, strategies to improve website facilitation were developed.

The low level of engagement with the website's online community prompted a return to the literature on the facilitation of online learning environments. As Bradley (2010) asserts, "the skill of the facilitator is integral to achieving successful outcomes". In 2000, Garrison, Anderson and Archer developed the Community of Inquiry Framework, which identified the following elements: *social presence*, *cognitive presence* and *teacher presence*, as crucial for effective online learning environments (Joannidou & Sime, 2012; Richardson et al., 2012). *Social presence* refers to

engagement that includes emotional expressions, personal narratives, and the development of group cohesion through a supportive atmosphere. *Cognitive presence* refers to the extent that group members are able to identify or exchange understanding or meanings related to the learning focus, helping each other to connect ideas, or develop solutions to challenges. *Teacher presence* consists of the strategies and means used by the teacher or moderator to facilitate social and cognitive presence (Richardson et al., 2012).

Reflection on my Alpha design cycle data highlighted that participants were engaging satisfactorily at the level of social presence, with most forum posts related to encouraging comments or feedback on Project Gallery uploads. However, participant feedback indicated that there was still further scope to generate a more relaxed atmosphere. More importantly, the website's capacity to stimulate cognitive presence through the use of the forums and webinars was recognised as under-utilised and under-developed. I therefore considered ways that I could employ *teacher presence* in order to further support the engagement of social and cognitive presence. Three specific strategies were thus developed:

- *A Project of the Month*;
- Regular online webinars; and
- Conversation starters in the forums.

6.3.2.1 The "Project of the Month"

The *Project of the Month* was initiated in response to data from some participants indicating that they wanted quick-access or prescriptive resources. I rejected the notion of providing prescriptive or didactic arts resources, as they do not promote situated learning within a CoP. However, reflections on how the website could provide further scaffolding for parents/carers to help them engage in situated and authentic arts learning, yet provide more specific direction and ready-access ideas, led to the development of the *Project of the Month*.

The *Project of the Month* page was established for the Beta cycle website, and outlined a flexible arts-rich project idea for parents/carers to facilitate with their children, with supporting resources and access to support via an online webinar. In order to support

authentic arts engagement a series of criteria was also developed to assist parents/carers in considering strategies they would use to deepen their child/ren's artistic skills and understanding. At the end of the month, members were requested to upload an overview of their project using the template provided which outlined their learning steps so that other families had the opportunity to use the ideas if they wished. A winner was chosen via anonymous ballot, which was open to all website members. All project entries received a certificate of participation and the winning entry, a certificate and printed t-shirt with the homeiswheretheartis.com.au logo. This initiative was intended to provide both the direction and support requested by parents/carers, especially with regard to areas of the arts in which they felt less confident, and represented a positive means to encourage greater engagement with Drama, Dance and Music: the arts subjects often perceived as more challenging to facilitate in home education.

6.3.2.2 Regular online webinars.

In order to scaffold the *Project of the Month*, regular online webinars were planned. These webinars would focus on the art subject/s included in the current *Project of the Month*, and provide inspiration and support for parents/carers, especially with regard to areas of the arts in which they felt less confident. Synchronous webinars permitted interaction between myself as the facilitator and encouraged interactions between group members. Rovai (2007) asserts that motivating learners to engage in productive discussions and emphasising student-to-student interactions develops social presence. The webinars could also explore the challenges of arts teaching and learning, providing opportunities for authentic content-and-task oriented discussions, thus establishing cognitive presence (Rovai, 2007).

6.3.2.3 Develop conversation starters

Based upon participant feedback regarding the potential for forums to present a more relaxed atmosphere, and the potential for the stimulation of greater cognitive presence via these, the strategy of "conversation starters" was planned for the Beta cycle forums. I would regularly initiate a forum thread with some form of simple question regarding participants' recent arts activity, encouraging users to share specific challenges or ideas related to arts learning. This was envisaged to generate

conversation through which members might construct and confirm meaning through discourse, thus enhancing cognitive presence (Richardson et al., 2012)

6.3.3 Summary of design changes

The above design changes were implemented and “released” to the home educating participants, thus ending the Alpha cycle of the design solution and commencing the Beta cycle. Some proposed changes, however, such as the provision of additional examples of arts learning throughout the website pages continued to be added throughout the Beta cycle as time permitted. The identified strategies to enhance facilitation of the website were also implemented throughout the Beta cycle.

6.3.4 Research goals for next iteration

Reflections on the Alpha cycle findings additionally helped to develop specific research goals for the Beta cycle in order to build upon the emergent findings. These were: understand participant engagement with the website; develop strategies to enhance online engagement; understand participant approaches to arts teaching and learning; and develop strategies to enhance authentic arts engagement.

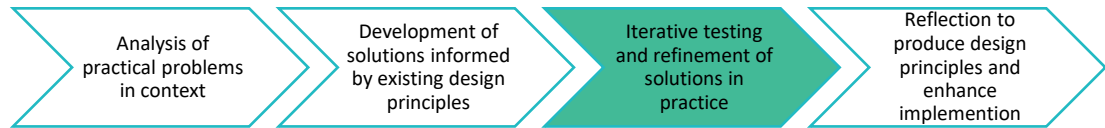
6.4 Chapter summary

This chapter has detailed the findings from the Alpha cycle of the Phase Three: Effectiveness Evaluation of homeiswheretheartis.com.au, which occurred from late January to April 2015. Data from a variety of sources provided multi-faceted insights into the experiences and perspectives of a small number of participants, helping to form understandings about the way that these families approached arts learning in their individual contexts. Importantly, these insights sat well with previous research that confirms that home education reflects sociocultural principles to learning, thus suggesting this theoretical framework was a helpful foundation for a website for home educators. These understandings, in combination with findings regarding participant use of – and response to – the first iteration of homeiswheretheartis.com.au, provided useful insights into aspects of the website that required further amendment, and those that were appreciated as beneficial. Following evaluation of potential changes as to

their viability, efficiency and legitimacy, a series of changes to the website's functionality, resources and facilitation were enacted, and the updated website was then released to participants.

CHAPTER 7

Effectiveness evaluation – Beta cycle



The second cycle of evaluation and refinement of homeiswheretheartis.com.au

In the first design iteration of homeiswheretheartis.com.au – the Alpha cycle - I developed an understanding of the ways that home educating participants were approaching arts learning, how the website was useful for their arts teaching and learning, and how the website required amendment to support these processes. In response to this analysis, a number of changes were made to the learning environment and its facilitation, and specific research goals for the next iteration identified. In this chapter I detail the findings from the Beta design iteration, showing how changes made to the website were again informed by data arising from this phase of analysis. The process of making iterative changes to the website was conducted in accordance with the procedures outlined in Chapter 3, which identified how inductive data analysis was used to identify, evaluate, and implement key changes to the website to better meet participant needs in delivering authentic arts learning in the home education context. I begin this chapter with an exploration of the data arising from the Beta cycle, and the challenges that arose and the strategies employed in response. I then turn to an exploration of emergent findings, showing how these were used to develop an understanding of participant needs and potential changes to the learning environment. I conclude the chapter with an overview of the final design changes at the end of the Beta cycle.

7.1 Data sources and challenges

Preparation for the Beta cycle data collection included the development of an anonymous internet survey, the organisation of four observation sessions of participants’ arts-engagement with their children, a semi-structured interview

schedule with five participants, and the embedding of functional site statistics to track the number and frequency of site visits. In addition to these data sources, participant emails and contributions to the website forum, Project Gallery, and online webinars contributed further data. A research journal was again a valuable source of personal reflections throughout this phase.

A number of challenges emerged in the Beta cycle that required strategic responses. Participant engagement in the Beta cycle survey again yielded a far lower response rate than the total number of enrolled participants. Out of the 86 enrolled participants, 21 (24%) surveys were completed, despite two reminder emails and advertising of the survey on the website and closed Facebook group. This total number was more satisfactory than the 13 surveys returned in the Alpha cycle, however a number of survey participants had not fully completed the survey, leaving only 14 complete responses, and seven partially-completed responses. Trouteaud (2004) found that estimates under five minutes for the time to complete web-based surveys yielded higher response rates than longer estimates over the ten-minute mark. However, they equally found that when researchers under-estimated the time it would take to complete their survey, this also led to lower completion rates. My Beta cycle survey was estimated at ten minutes completion time; perhaps one reason for low completion rates. I further wondered whether some participants may have taken longer than 10 minutes to complete the survey, which may then have contributed to the number of incomplete surveys. Such reflections were important for the final design of the survey in the Gamma cycle. While the Beta cycle survey data could not be considered as representative of all participant perspectives, given the small numbers of returned surveys in comparison to the total number of registered participants (Baruch & Holtom, 2008), it nevertheless provided important insights into participant perspectives on arts learning and homeiswheretheartis.com.au.

Similar to challenges experienced during the Alpha cycle, discernible data in the form of Beta cycle survey responses or contributions to collaborative features of homeiswheretheartis.com.au were not evident from the majority of participants. I again questioned whether the website was only being used by those who visibly interacted with the community aspects, or whether a portion of “silent participants” were still accessing the site, but providing no feedback. Following the unsuccessful

embedding of site analytics in the Alpha cycle, a page counter and basic site analytics were added to the Beta cycle website as an important way to determine if members were engaging with the website, even if they were not providing feedback via other sources of data collection. These tools provided helpful insights and encouraging statistics to show a greater level of site interaction than other sources indicated. These tools, however, did not yield a satisfactory insight into exactly how many users were accessing the site in total or the pages that were accessed most frequently. As such, a more comprehensive statistics package was sought for the Gamma cycle.

In spite of the challenges that arose through both the Beta and Gamma cycles, other sources of data via interviews, observations, participant emails, forum posts, Project Gallery uploads and webinar interactions provided rich insights into participants' arts teaching and learning practices, and how the website could be refined to support these. I turn now to a discussion of the Beta cycle findings.

7.2 Beta cycle findings

Reflections on the Alpha cycle findings helped to develop specific research goals for the Beta cycle in order to build upon the emergent findings. These were: understand participant engagement with the website; develop strategies to enhance online engagement; understand participant approaches to arts teaching and learning; and develop strategies to enhance authentic arts engagement.

In addition to these research goals, a number of changes to the website's functionality, resources, and facilitation were implemented. The Beta cycle data collection and analysis was thus directed by these Alpha cycle research goals which helped to identify the effectiveness of the changes made at the end of this phase and inform the Beta cycle. Findings in response to each of these research goals are now explored.

7.2.1 Research goal 1: Understand participant engagement with the website

All data sources helped to form an understanding of how participants were using the website. During the four-month duration of the Beta cycle, seven new members joined via word of mouth, and two existing members asked to withdraw, citing time

restrictions and lack of engagement with the project respectively. This left a total of 86 enrolled participants during the Beta cycle. Site interaction and survey data indicated that significantly fewer than 86 participants were actively engaging with the site; however Beta cycle data did indicate that site interaction had grown, demonstrated through a doubling of Project Gallery uploads (Table 11), and almost a tripling of forum posts (Table 12). Of the 21 participants who responded to the Beta cycle survey question regarding frequency of website access, 11 respondents indicated that they accessed the site on a regular or semi-regular basis, which was higher than the 7 visibly active participants who contributed to the Project Gallery and forums. Beta cycle site statistics (Figure 12) likewise revealed that the website was being accessed daily, indicating that it was receiving regular traffic, although the total number of members accessing the site could not be ascertained with the chosen software. This led to a more comprehensive statistics package being chosen for the Gamma cycle website.

Table 11 Beta cycle participant uploads to the Project Gallery

Project:	Project Description:	Resources sourced from website:
<i>Daniel: a French Play</i>	Integrating Drama and LOTE	Project of the month Arts template
Horrible Histories	Integrating History, Drama and Media Arts to explore perspectives of historical persons regarding “white invasion” of Australia	Project of the month Arts template IAF Voice skills
Ned Kelly News story	Integrating Drama , English and History in a large, multi-age project exploring the different perspectives surrounding the Ned Kelly shooting at Glenrowan	Project of the month Arts template IAF Online meetup
Dance the Compass	Using Dance to explore direction and memorise the points of the compass. The girls made up the song and accompanying movements.	Project of the month Arts template
Passing Time	Exploring the process of human aging through Dance	Project of the month Arts template IAF

Meerkat Boogie	Learning about Meerkats and exploring their movement using Dance	Online Meetup Project of the month Arts template IAF Online meetup
Literary Devices 1	Using Drama re-enactment to understand literary devices, especially personification	Improvisation
Literary Devices 2	Using Drama re-enactment to understand literary devices, especially personification	Improvisation
Our town now and then	Media Arts project exploring the history of the local area through comparative photographs from the past and present	Camera technique Framing
Birds	Visual Art project, creating quirky birds as a decoration	No
Acrylic Artwork	Visual Art – Acrylic paintings of ballet dancers	No
Acrylic and Pastel Artwork	Visual Art – Acrylic and pastel painting of a seascape	No
Greek Mythology Play	Drama: Re-enacting a Greek myth. All characters enacted by the one child, enabling him to thoroughly explore role.	Voice and movement Role play

Table 12 Beta cycle forum posts

Post Type	No. of forum posts
Researcher-initiated conversation	10
Participant responses to researcher posts	8
A participant starting a thread to ask a question	4
Researcher response to participant information or questions	8
Forum post sharing Project Gallery uploads	12
Participant comment or question regarding a Project Gallery upload	27
Total posts	69
Participant posts	51
Total number of forum participants excluding researcher	7

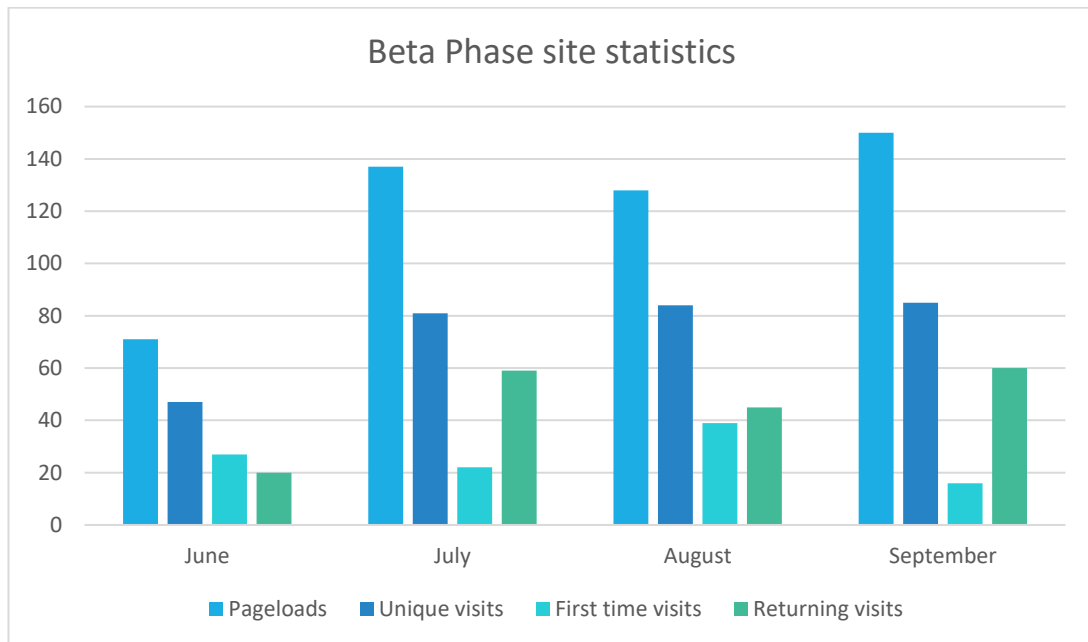


Figure 12 Beta cycle site statistics

A fundamental feature of the website’s design were the interactive features such as the forums, webinars, and Project Gallery that would facilitate and support the development of an online Community of Practice (CoP). These features were intended to support parents/carers in the collaborative construction of knowledge and understanding that would support and inform their arts teaching and learning. At the end of the Alpha cycle, low participation rates in the online CoP compared to the overall participant numbers had raised questions regarding whether participants wanted and benefitted from an online CoP. Beta cycle data collection therefore focussed on developing an understanding of the nature of the online CoP that was steadily growing in the website. Survey data and site statistics showed that the number of times the site was accessed was greater than visible participation in the collaborative features of the website, demonstrating that some research participants were accessing the website without engaging in the collaborative features. Survey responses to the various elements of the online CoP showed that most respondents found all aspects of the online CoP beneficial, or very beneficial, with only one respondent indicating some aspects as not useful (see Figure 13). Whilst the response rate was small, these were positive indications that the online CoP was a useful inclusion within the website.

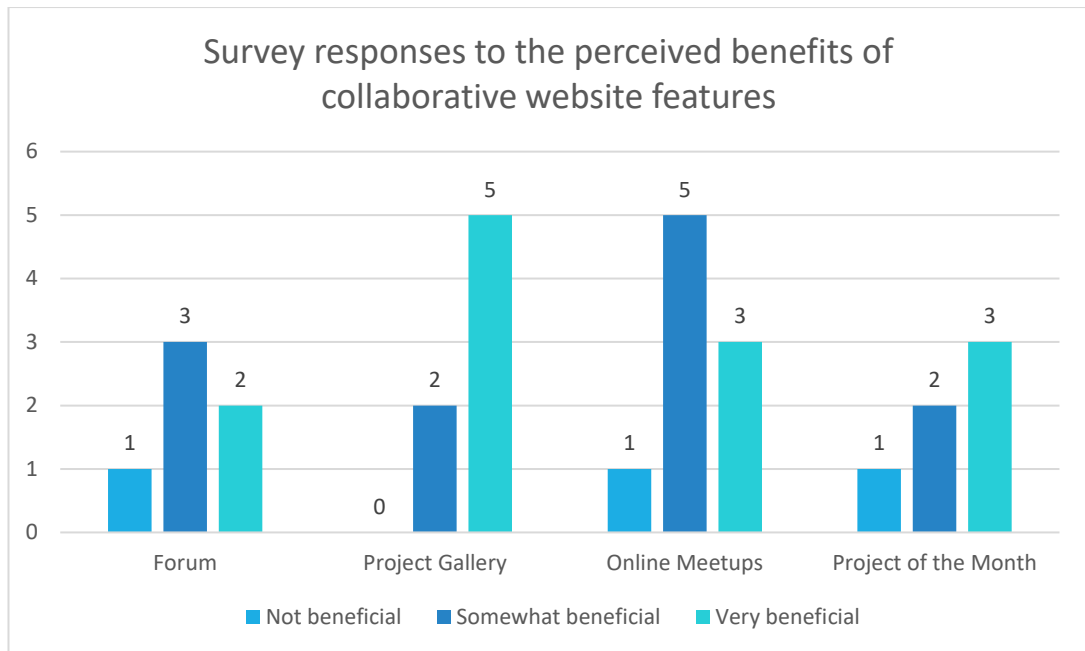


Figure 13 Survey responses to the perceived benefits of collaborative website features

Active engagement in the online CoP was developing, albeit slowly, however such findings resonate with Lave and Wenger’s (1991) concept of legitimate peripheral participation, whereby newcomers engage in peripheral activities or contribute at a basic, low-risk level prior to more extensive engagement in the community. Such understandings were very much in line with the activity revealed by the Beta cycle data, which highlighted that some participants were not contributing to the online CoP, but were nevertheless engaging through peripheral activity. Jane’s story was one example of this at work: Jane had joined the project at the commencement of the Alpha cycle, but had not made any discernible contributions to the website’s collaborative features. The first indication of her participation in the online community was towards the end of the Beta cycle when she uploaded to the Project Gallery in response to the *Project of the Month* challenge. Such activity was a positive indication that participants who may not be actively engaged in the online CoP were nevertheless potentially engaged in legitimate peripheral activity, even if that only included viewing other people’s contributions to the Project Gallery and Forums until they felt comfortable to engage in a more visible manner.

Wenger, McDermott, and Snyder (2002) assert that a CoP will naturally invite different levels of member participation, noting that equal participation is an unrealistic expectation. They contend that within a functioning CoP, three common groups may be observed:

1. a small, committed core who actively and regularly participate, forming the “heart” of the community, advancing the community’s agenda, and who comprise approximately only 10-15% of the total community members;
2. an “active” group who participate without the regularity or commitment of the core members – usually 15-20% of the total community number; and
3. the vast majority: peripheral members, who rarely participate, preferring to keep to the sidelines and observe the community interactions of the core and active members.

Importantly, Wenger et al. (2002) note that the peripheral participation of the vast majority should not to be underestimated:

In a traditional meeting or team we would discourage such half-hearted involvement, but these peripheral activities are an essential dimension of communities of practice. Indeed the people on the sidelines often are not as passive as they seem. Like people sitting at a cafe watching the activity on the street, they gain their own insights from the discussions and put them to good use. They may have private conversations about the issues being discussed in the public forum. In their own way, they are learning a lot. (p. 56)

These insights helped to make greater sense of the emerging online CoP that was developing in homeiswheretheheartis.com.au and helped to confirm not only the benefits of running the website as an online CoP, but also the value of this to the many peripheral participants who may not have been contributing actively to the community, but who nevertheless may have been benefitting from it.

Whilst peripheral participation can be perceived as valid community membership, Wenger et al. (2002) highlight it is often based upon inhibitions, such as lack of confidence regarding the value of contributions, or from lack of time. Again, these findings correlated with participant feedback gained throughout the Alpha and Beta cycles: time restrictions were frequently cited by survey and interview participants as one inhibiting factor:

That is the biggest thing, I think: making the time to do it and actually regularly look at [the website], and then I would feel more confident and comfortable with it, and then I would be more likely to use it. (Natalie)

Similar sentiments were held by other participants. Additionally, lack of confidence was also recognised as a potentially inhibiting factor for community participation, with a number of participants noting that they found it challenging to make contributions to the Project Gallery based upon a sense of inadequacy. Eve, who possessed high levels of confidence with Visual Art but lacked the same level of confidence in Dance was initially nervous about sharing her daughters' Dance project in the Project Gallery, and sought my confirmation via email prior to uploading:

I think people would have a hard time... they'd think, 'This isn't worthy'. And honestly, to put the girls' [Dance project] up, I didn't think it was that worthy either. That's why I ran it past you first. And you said, 'That's good,' and then I thought, 'Okay, I'll put it up'. (Eve)

A number of interview participants, who were generally core or active members of the online CoP, expressed similar thoughts – that uploading to the Project Gallery took some courage – thereby helping to understand how much more challenging it may be for peripheral participants to contribute for the first time. As such, whilst I appreciated that the nature of the emerging CoP within homeiswheretheartis.com.au was functioning according to Wenger et al.'s (2002) expectations regarding varying levels of participation, I nevertheless recognised the need to enhance opportunities for deeper engagement by limiting inhibiting factors and continuing to develop the community as a “safe space” in which to share ideas and experiences.

Beyond ascertaining the extent of participant engagement with the website, I also sought insight into *why* participants were accessing the website. Survey responses indicated that the predominant reason for engagement was to find arts learning ideas or inspiration. This understanding was reinforced through survey and interview data, which showed that participants considered the Project Gallery and Arts Subject pages - the main locations for the sourcing of arts projects and activities - as the most useful aspects of the website. These findings, and some participant requests for “more downloadable activities” (prescriptive step-by-step projects), raised questions as to how direction and support could be provided without dismissing the principles of sociocultural learning theory which underpinned the project. Survey and interview data demonstrated that most participants were actively sourcing arts learning ideas from a large variety of sources, including tutorial videos, printable instructions, existing lesson plans, books, curriculum, hands-on experiences encountered through daily living, blogs, arts-specific websites, and private tuition. Through the interviews, I found that parents/carers invested a considerable amount of time in locating and adapting resources and learning activities for their children. These revelations aligned with research that shows large time investments are often made by home educating parents in supporting their children’s educational needs (Harding, 1997). As such, the need to provide more resources was questioned. In interview, Grace affirmed that merely providing resources was not necessarily helpful; rather, scaffolding for the use of existing resources was preferred:

... resources can be there – that’s fantastic. But if you don’t understand it, or you don’t have time to get to it, or you don’t have someone to help you assess ... or ... reflect on whether or not you achieved it or got through it, it doesn’t... you know. I’ve got that many resources here it’s not funny, and half of them I haven’t used. And it’s not a matter of the ones you understand and are going to use, making those work. It’s about you... teaching us how to do it for ourselves, so that we can then go and apply it to any other learning situation in the future. (Grace)

Through an evaluation of participant engagement with the website, it became clear that - whilst inspiration and ideas were the predominant reason for accessing the website – *more* arts resources were not necessarily what participants required, given

that these were readily and extensively available in a variety of other places. Rather, the website's CoP – and not its provision of static resources - was recognised as the most fundamental feature to improve participant understanding and confidence in the Arts. I thus reflected that parents/carers needed inspiration via both the website and its online CoP to support and make use of existing resources, and most importantly, to make this learning relevant to their contextual needs. Importantly, research from Wenger et al. (2002) which shows that only a small percentage of members in any CoP participate with regularity and intensity, provided scope to appreciate that the development of the website's community was satisfactory, and that the level of visible participation was not necessarily indicative of the benefits or otherwise that participants may be attaining from their participation in the project.

Implications for future research and development:

- Ascertain strategies to stimulate parental confidence and participation in the online CoP; and
- Ascertain strategies to support parents/carers in making use of existing arts resources according to their contextual needs.

7.2.2 Research goal 2: Develop strategies to enhance online engagement

At the completion of the Alpha cycle, I proposed a number of improvements to website facilitation in order to enhance participant engagement in the online CoP. These were:

- The commencement of the *Project of the Month* initiative to stimulate engagement with all five arts subjects, including those that were currently unrepresented in participant uploads: Dance, Drama, and Music;
- Regular webinars which were run in tandem with each *Project of the Month*, providing scaffolded support for the project focus through hands-on learning for parents/carers, and a platform for participant knowledge-sharing and questions; and

- The stimulation of social presence and cognitive presence (Garrison et al., 2000) through the introduction of “conversation starters” in the forums, encouraging users to share specific challenges or ideas related to arts learning.

Beta cycle data analysis provided scope to evaluate the usefulness of these strategies, which then underpinned the development of further strategies to engage participants in the online CoP and to minimise inhibiting factors which could prevent deeper engagement.

Of the aforementioned strategies, the *Project of the Month* and webinars were the most successful in achieving the intended aims of enhancing participant engagement in the CoP and the arts subjects. These strategies generated a number of positive comments. In particular, Grace found the initiatives very helpful for her arts teaching and learning, finding them “really helpful” and a positive scaffold that enabled her to implement arts learning in which she felt more confident:

I really like the way you have the monthly project. You talk about it first, you give us ideas of what we’re trying to achieve... You’re giving that ground work, and then we can get a chance and go on practice it and come back, and then we’re getting that feedback on how did we go... That’s giving us the chance to practice those skills so that, by the end of the year, we should be comfortable enough to then go and continue doing that... I also like having the deadline. I know that I am going to have a go at it and try to get it done, otherwise there’s other stuff and I go, “We’ll get to it, we’ll get to it.” ... I’m looking forward to now doing the Drama [project] and I know that we’re going to get stuff done that we wouldn’t normally have done. We’re getting that push in the right direction. (Grace)

Upon announcing the *Project of the Month* initiative to all participants via a forum post and email, I received five email responses from participants, including three peripheral participants who had previously made no contact, stating that they really liked the idea and were keen to participate. After its introduction, almost all Project Gallery uploads were stimulated by the *Project of the Month* challenge, and Jane, who had previously not been visibly engaged with the online CoP, contributed her first project to the Gallery in response to the Drama challenge. Such responses indicated

again that some participants who were not visibly interacting with the online CoP were nevertheless viewing activity ‘from the sidelines’ (Wenger et al., 2002), and the *Project of the Month* had encouraged them to participate beyond their previous level of engagement. Additionally, this monthly challenge not only visibly increased uploads to the Project Gallery, but also increased the forum participation through member comments on uploaded projects.

The *Project of the Month* was an ideal means to stimulate and support engagement with the art subjects that were absent from Project Gallery uploads in the Alpha cycle: Dance, Drama, and Music. Each monthly project was developed according to the art subjects that had not been explored extensively in the Project Gallery, which I interpreted as areas for potential growth that may require support. Encouragingly, participants began engaging with these particular arts subjects in response to the various projects, supported by the webinars, which acted as important scaffolds. Further, all members who contributed projects in response to the monthly challenges used the provided template to relate the details of their learning project. This was an important indicator that a template represented a useful tool to guide planning and reflection. The evidence of authentic arts engagement in the Beta cycle uploads and use of resources from homeiswheretheartis.com.au was much stronger (see Table 11), and led to deeper reflection on the development of a template that might stimulate even more authentic engagement for the next website iteration.

In addition to the *Project of the Month* initiative, another Alpha cycle recommendation was made in order to enhance online participation within the Beta cycle forums: stimulate social and cognitive presence (Garrison et al., 2000) through “conversation starters”. As the forum facilitator, I initiated forum threads that invited participants to share their perspectives on arts-related issues such as challenges and successes related to arts teaching, or their perspectives on resources in the website such as the Integrated Arts Framework (IAF). These conversation starters yielded some participant engagement: for the 10 conversations I started, only eight participant posts were submitted in response. It was noted that participant responses to these conversation starters generally only engaged with my question, rather than each other’s contributions. Questions regarding the impact of my role as the site designer, researcher and forum facilitator emerged as I considered whether this another situation

of participants feeling intimidated. When I discussed this issue with interview participants, the frequent response was that they were invested in other social platforms, and did not feel the need to engage with “yet another” forum. A number of participants questioned whether the interactive aspects of the website, in particular the Forum, might be engaged with more extensively if they were based in an existing social platform. Jean said, “I think perhaps if you had a Facebook group. Not just a page but a group that’s just for that discussion... People seem to be more chatty on Facebook.” A survey respondent similarly noted that they liked, “the online community for the arts idea. However, I am not sure another website is needed when there are so many free social platforms already used. Pinterest might be better?” (Respondent #6).

However, whilst this attempt to stimulate cognitive presence through participant sharing of ideas and understanding in the forum had apparently been unsuccessful, participant responses to the Project Gallery uploads of fellow participants was far more encouraging. The overwhelming majority of posts during the Beta cycle consisted of comments or questions between participants regarding new uploads to the Project Gallery. Posts such as: “What a great idea! I have never thought of doing LOTE and DRAMA together like that. Something else I would like to try with my kids. Thanks for sharing,” and “I have just had a chance to check out your video, what a fantastic job! Congratulations to your son on a wonderful news report!” were typical of the kinds of comments that characterised these forum interactions, demonstrating peer recognition and review at work (Gunawardena et al., 2006), which was always received with positivity and gratitude by those who had shared their projects. Sometimes, questions were asked about a technique used, and helpful links or resources were shared between participants in response to these questions. Such interactions were indications that a positive social presence was building between participants in the site, evidenced in discussions between members when questions were asked.

The more extensive engagement that occurred between participants without my instigation were cause to reflect upon the nature of authority when establishing a CoP within the home education community. Given that some researchers have identified a reticence in some home educators to engage with authority figures (Barratt-Peacock,

1997; Townsend, 2012), I considered whether a similar dynamic might be at work in homeiswheretheheartis.com.au, and whether Garrison et al's (2000) views on the necessity of teacher presence in online communities might still be true for home educating communities. Such insights revealed important research goals for the final, Gamma cycle of the website in order to better understand the optimal nature of facilitating learning in online home education communities.

Overall reflection upon the ways in which the forum was being used indicated its importance in the website. It enabled the communication of events such as the online meet ups and *Project of the Month* challenge. It also represented a means for mutual encouragement in the online community and the sharing of ideas as required. However, participant suggestions regarding the utilisation of existing social media sites in lieu of the website in order to encourage further engagement warranted consideration, and sat well with understandings of the benefits of working within the Zone of Proximal Development (Lave & Wenger, 2005). By working in an optimal “zone” within which members felt familiar, opportunities to extend learning in a manner that made connections to their pre-existing knowledge would be enhanced.

Reflection upon the nature of the developing CoP within the website and evaluation of the strategies employed to enhance online engagement during the Beta cycle yielded useful understandings for the next phase of the website. The website's CoP was recognised as the most fundamental feature of improving participant understanding and confidence in the arts, especially through the *Project of the Month* and associated webinar. The success of these two strategies led to reflection on further ways to strengthen and scaffold participant arts interaction. Finally, strategies to make use of alternative social platforms in order to build participant engagement in the online CoP were considered.

Implications for future research and development

- Develop strategies to foreground the online community features of the website (*Project of the Month*, webinars, forum, Project Gallery and closed Facebook group);

- Consider strategies to scaffold participant arts teaching and learning processes through the *Project of the Month* and webinars;
- Consider strategies to make the available resources more useful in conjunction with the online community aspects; and
- Consider if existing social platforms such as Facebook or Pinterest would provide a more appropriate alternative to the website's Project Gallery and forum.

7.2.3 Research goal 3: Understand participant approaches to arts teaching and learning

Alpha cycle data analysis identified a number of strategies participants used when facilitating their children's arts learning which each family employed flexibly, based upon unique contextual and philosophical influences. In the Beta cycle, more specific understandings were sought regarding the process of implementing the arts learning strategies, as identified in the Alpha cycle (see Figure 6). This was achieved through investigating and mapping the *processes* home educating participants engaged in when planning and enacting arts teaching and learning. Given my focus on supporting authentic arts learning, and in particular, ways that integrating arts learning across the curriculum might be supported amongst home educators, I sought to understand more clearly whether this focus was reflective of home educator's preferences, and equally, whether the IAF was aligning with their approaches to arts learning. Such understandings would then permit insights into how the IAF and the wider website needed to change to better reflect these processes and support authentic arts engagement. Interviews, observations, and Project Gallery uploads provided rich data for this focus, and enabled insight into the processes different families used when planning and facilitating arts learning with their children. As such, I engaged in a study of participants' *processual* approaches; that is, I focused on understanding the *processes* involved in arts teaching and learning episodes. This then enabled me to create a 'map' for each participant regarding a main 'order of events' in their arts learning approaches.

Using the IAF as a starting point, all interview participants were asked to outline a typical approach to arts teaching and learning, noting how their usual processual approach aligned with, or differed from the IAF. Importantly, Argyris and Schön (1974) assert that a divide often exists between espoused theory and the enactment of this theory, also called “theory-in-use”. As such, the observations and Project Gallery uploads were used in conjunction with the interview data to enrich the understandings gained through all interviews, and to evaluate participants’ espoused theory alongside their theory-in-use. The interviews, observation and project uploads then contributed to the development of a ‘map’ for each participant’s processual approach to arts teaching and learning. The maps for each interview participant consisted of a flow chart of the key processes or stages in their arts teaching and learning, with additional detail to describe attributes of each of these stages (see Appendix M).

The mapping and analysis of participant processual approaches to arts learning helped to reveal two key understandings that had implications for the future development of the website: first, that arts teaching and learning processes were driven by context. Second, whilst families engaged in Arts learning in unique ways, there were also common processes evident across all home educators’ approaches to arts teaching and learning. This then provided insight into supporting these processes through the website. These two key understandings are now explored.

7.2.3.1 Arts teaching and learning processes are driven by context

Alpha cycle data analysis found that a family’s context-dependent features shaped the arts learning strategies that parents/carers employed. These findings were extended during Beta cycle data analysis to identify that processual approaches were reflective of both contextual features *and* the chosen arts-learning strategies identified in the Alpha cycle (see Figure 6). This reinforced Alpha cycle data analysis which highlighted that educational strategies and approaches emerged from the family’s sociocultural context, situating the findings with existing literature on home education as sociocultural practice (Barratt-Peacock, 1997; Jackson, 2015; Thomas, 1998). The relationship between contextual factors, teaching strategies and learning processes employed is represented in Figure 14.

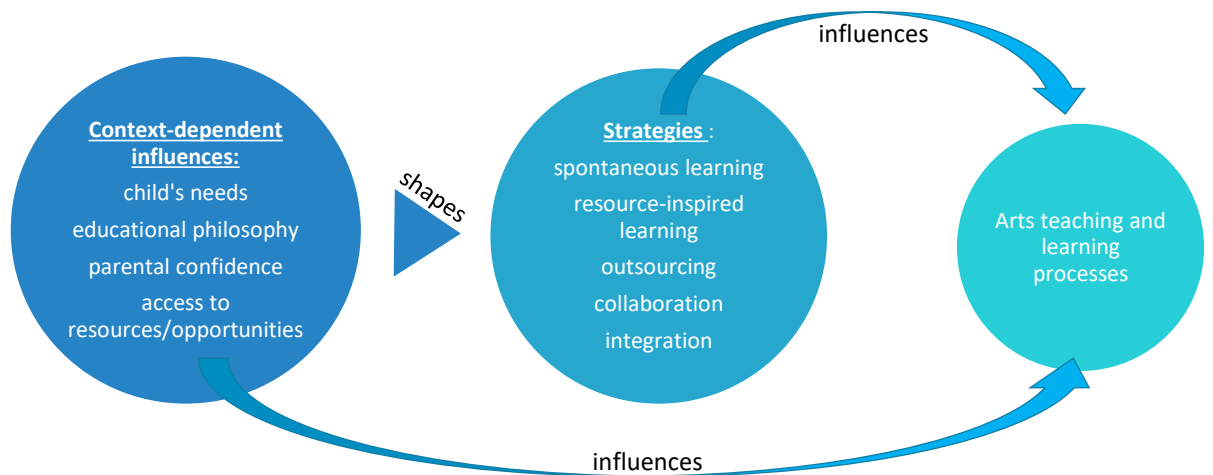


Figure 14 The influence of context upon approaches to arts learning

Eve’s story is a useful illustration of the influence of context-dependent features on a family’s processual approach to arts learning, and of the difference that can occur between an espoused theory and theory-in-use. Eve was a trained teacher and practicing visual artist, and adopted a natural learning approach (see Chapter 2) to her children’s education, all of whom were in their early primary or pre-school years. Her belief in the importance of the Arts, her confidence with visual arts learning, and her faith in her children’s natural propensity to learn informed and contributed to a relaxed and generally integrated approach to arts learning, whereby she looked for opportunities in the wider curriculum to weave in arts engagement at appropriate times. When asked to reflect on the process she usually engaged in for arts learning episodes, Eve’s retelling included an uncomplicated process which began with the development of the arts activity or project idea, whether it arose through seeking ideas or as a spontaneous idea in the midst of wider learning, followed by engagement in the creative process.

Eve’s project ideas often emerged from a synthesis of understanding her children’s interests, their current studies, and ideas she had encountered in her regular online research, which informed the embedding of arts learning in the family’s immediate context. Engagement in the creative process usually included providing the guidance and resources to complete the arts activity and then allowing her children the freedom to immerse themselves in this experience. Her relaxed approach was thus highly reflective of her educational philosophy, her confidence as a trained teacher and visual arts practitioner, and of her implicit valuing of her children’s needs.

Eve felt that issues such as fulfilling curriculum requirements and the development of artistic knowledge and understanding were less significant to her educational approach than promoting her children's love of learning, and these aspects were therefore not given prominence in her processual approach to arts learning:

When it comes to visual art techniques, they usually do what I do. So I'll do watercolour because I'm into watercolour and clay. Still at this age I wouldn't explicitly teach technique yet. I usually just give it to them and let them play... I don't want to start bombarding them with 'You should do it like this,' or 'You should do it like that'. Even representational artwork; I wouldn't make them make it look like anything. (Eve)

Eve's natural learning philosophy and deeply held conviction to develop her children's love of learning was reflected in her processual approach to arts learning and her decision to omit an explicit focus on artistic techniques and conceptual understanding.

However, when observing Eve conducting an arts-learning episode with her children, a fuller picture emerged of her theory-in-action which highlighted how frequently her natural interactions with the children during the creative process included spontaneous discussion of concepts related to the immediate and wider world, and relevant artistic knowledge and understanding. When I later raised this observation with her in relation to her previous assertion that she did not focus on developing artistic knowledge and understanding with her children, Eve began to appreciate how everyday conversation was quite naturally embedded in her approach to home education, but that until it had been pointed out, she had not been overtly aware of how much her children were gaining from these impromptu conversations. In our discussion, I outlined what was intended by the "Develop Key Skills" phase of the IAF: the development of children's arts literacy and skills in order to deepen their engagement. Eve responded: "...all those things I do anyway, but I would not think of them as necessarily developing any kind of skills. I just do them."

Eve was not focussed on "teaching" her children as much as she was focussed on engaging with them, via their learning focus, through family conversation. Barratt-Peacock (1997) identifies family conversation as a fundamental feature of the home education environment. He states, "...the ongoing family conversation, experiences

gained from domestic occupation and accompanied excursions into the field of authentic adult practice are problematised, built into the developing family worldview, and adapted by individual members for their own personal learning” (Barratt-Peacock, 2003, p. 101). Eve’s proficiency in Visual Art provided contextually-relevant guidance for her children, and through conversation, the “pursuit of learning objectives into the world of real practice” (Barratt-Peacock, 2003, p. 107).

A similar dynamic was again recognised later in the interview during a discussion of the “Reflect on Learning” phase of the IAF. Once again, Eve experienced fresh insight into her processual approach to arts learning and how her children were engaged in the reflective process on a regular – albeit unintentional – basis that flowed from her philosophy of education as being a part of life:

I guess a lot of our reflection comes when we’re debriefing with ‘Dad’. And sometimes that’s during the day (Eve’s husband works from home) and sometimes it’s at dinner... And sometimes [with] Nana and Papa. So I guess the debriefing comes when they are talking to someone else... It’s not even often they have to ask - it’s just like, ‘Nanna and Papa we did this today! We did this yesterday,’ or whatever. (Eve)

Similarly, Eve realised that her journal and home-schooling blog to record the family’s educational journey served as a form of personal reflection. As she thumbed through her journal, which was a rich visual and written record of her children’s learning, she stated,

I’m trying to plan less and reflect more - just this year - because in the past, the more I planned, the more frustrated I got that we didn’t get it done. Because if I only plan a little bit and we get it done – woo hoo!

As such, Eve’s approach to arts learning was re-mapped to represent a more comprehensive picture of her processual approach, which was a very clear reflection of her context. When presented with this more comprehensive “map”, Eve responded overtly favourably.

The “map” presented to Eve (Figure 15) was divided into three key stages, using the language from the Beta cycle IAF to describe the key processes Eve discussed with me in interview, in addition to elements I observed during her arts teaching session with her children. In the first stage, Eve developed her arts project ideas through ideas she had sourced from wider resources, her children’s interests, and sometimes through the arts curriculum. Following this, she engaged her children in hands-on creative activity. Importantly, throughout this process, her discussions with the children embedded key skills and understandings regarding that particular art form. Finally, reflection on the arts learning process occurred through Eve’s regular home education journal and blog, through her record keeping for registration, and through family conversation.

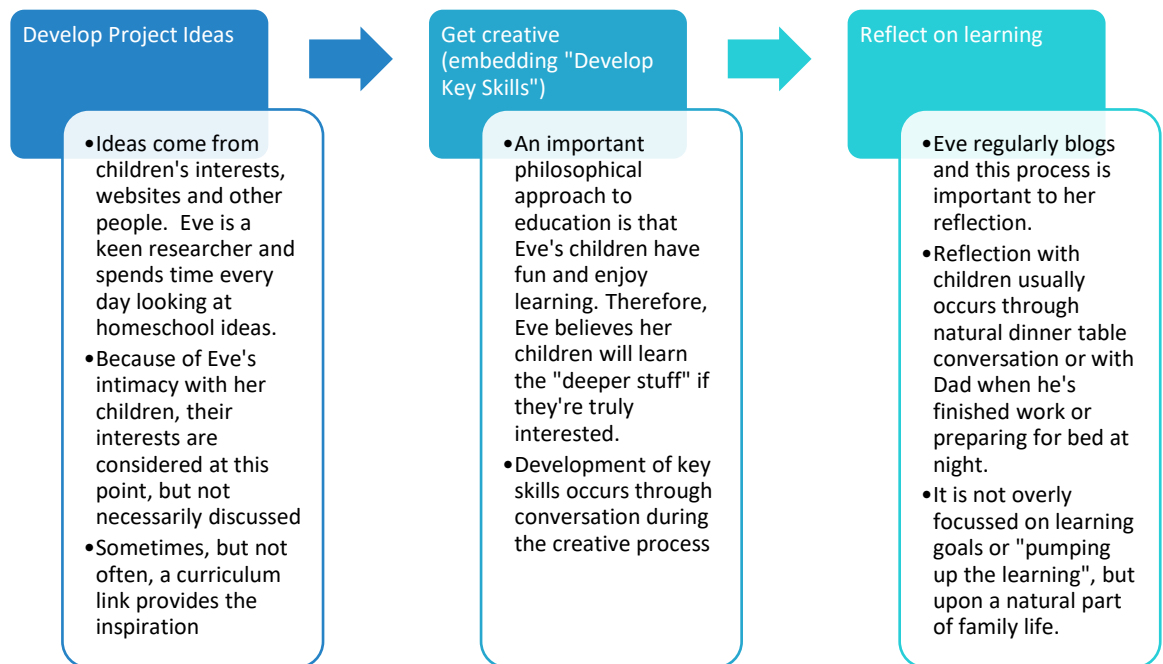


Figure 15 Eve’s theory-in-action regarding arts learning

Eve was one of the five interviewees, and in each family, visible connections were observed between the family’s contextual features and their preferred arts learning strategies and approach. This confirmed that arts teaching and learning were very much embedded in each family’s sociocultural practice. Before exploring the implications of this for the design of homeiswheretheartis.com.au, insights into common approaches found across all interview participants are now explored.

7.2.3.2 Commonalities across processual approaches to arts teaching and learning

The mapping of arts teaching and learning processes highlighted the uniqueness of each family's approach to the arts whilst enabling the identification of common approaches across all interview participants. This was particularly important in understanding how the IAF could be modified to better meet arts teaching and learning approaches currently in use. The Beta cycle survey highlighted that, whilst not all participants used integration, it was still highly valued by many. Every survey respondent affirmed their belief that integration was a positive approach, with two participants describing their reasons for this assertion:

I think it is extremely important for a well-rounded education and to engage all individuals in meaningful learning. It can also allow children to engage in material that they might otherwise struggle with, as it can create real, authentic learning opportunities rather than prescribed and limited ones. (Respondent #15)

I love the idea that the Arts can be easily covered within every subject taught. After all, everything is connected – we should be teaching the connections! (Respondent #14)

However, in spite of appreciating integration as a positive approach, two respondents indicated potential pitfalls with an integrated approach:

It sounds like a good idea but my kids have not been enthusiastic. It is a challenge to include the learning component of art in this context rather than simply an activity. My kids seem to view it as an unwelcome extension of what they have to get done before they have finally finished school for the day. (Respondent #4)

We can definitely integrate all areas of the arts into our everyday learning but it's easier when we naturally have an interest in the arts. It may be more difficult for a parent or teacher that does not share the same passion. (Respondent #3)

The extensive agreement regarding the benefits of an integrated approach to arts learning reinforced my decision to include integration as an approach to learning in homeiswheretheartis.com.au; however I also recognised the need for additional support for families lacking confidence or proficiency in the arts, as well as an “open” approach to the arts that did not necessitate an integrated approach should families decide not to use this approach.

Other commonalities across participant approaches to arts teaching and learning were identified through the mapping process, which enabled me to identify that each family included specific “steps” in their approach to arts teaching and learning where they:

1. developed or sourced the arts learning project/episode idea, and
2. enacted the creative process whereby the child engaged in some form of creative endeavour related to the arts project/activity.

Further to these common steps, and in response to the “Develop Key Skills” and “Reflect on Learning” steps of the IAF, most families also made mention of, or demonstrated, various ways in which they:

3. deepened their children’s arts-specific skills and understanding during arts projects; and
4. reflected on the learning experience.

Most families acknowledged that the level of these latter elements of the arts learning process received far less attention than the development of arts project or activity ideas and the enactment of the creative process. When discussing the deepening of arts knowledge and skills and the role of reflection in learning, most participants admitted that these elements of arts learning often occurred in a cursory, or implicit manner through general, context-specific conversation, rather than receiving intentional focus in arts learning. The implications of less-intentional engagement with these latter two phases of the arts learning process are explored in the following section where I consider strategies to enhance authentic arts engagement.

These four common arts learning processes identified above in the approach of the interview participants were compared with the current steps of the IAF (see Table 13).

Table 13 Steps of the IAF compared to common arts learning processes in home educating participants

Beta cycle - Steps of the IAF	Common arts learning processes in home education participants
Discuss interests	-
Develop project	Develop the arts learning idea
Connect to curriculum	-
Develop key skills	Develop children’s arts-specific skills and understanding during the project
Get creative	Engage in creative endeavour
Reflect on learning	Reflection on learning

Notably, I found that two of the phases previously included in the IAF were not reflective of approaches used by all participants. The IAF began with the phase: “Discuss Interests”, which focused upon parents/carers and children overtly discussing personal interests that could be explored through their arts learning. For most interviewees, discussion of interests rarely occurred as an intentional event, but was embedded in everyday interactions such that implicit understanding of their children’s interests and needs underpinned learning and did not require special focus when it came to arts planning. As such, I recognised that this stage of the IAF was not necessary in the design of a framework for integrated arts learning. A second element of the existing IAF was also not reflective of the approach taken by interview participants. The stage: “Connect to Curriculum”, was designed to help home educators navigate and make meaningful connections to the *Australian Curriculum: The Arts*. However, all interview participants acknowledged that fulfilling the curriculum requirements was secondary to their children’s individual learning needs,

and that a focus on the Australian Curriculum often occurred after a project was completed, as families prepared documentation for reporting and registration.

We create it (the arts project), and then probably as I'm reflecting I'd look at the skills they were developing as well as the links to curriculum... half the time if you pour through the curriculum, you can find something to connect it to. There is always a way to connect it. (Eve)

You know what? To be honest, [fulfilling the curriculum is] less significant to me, and I usually just go "all right we've done it! Happy with that! What can I link that to?" Because I find you can almost talk your way around just about anything you can make it fit to. I think everything fits in some way. And it's a matter of describing how... I haven't been able to not link it to at least one other point. (Jean)

Survey responses regarding the inclusion of the Australian Curriculum in arts learning varied, with three out of 15 (20%) respondents indicating that the Australian Curriculum was important in their arts learning (see Table 14). Two of these families modified learning outlined in the curriculum to meet their children's interests, and one family indicated that they followed the curriculum. Such responses again affirmed that – for the majority of participants – the needs of the child were more important than following a set curriculum, however the value of the Australian Curriculum was appreciated by some.

Beyond ascertaining the elements of the current IAF that were congruent with existing approaches in participants' arts teaching and learning practices, the process of mapping different families' processual approaches also highlighted that a sequential set of steps to describe arts teaching and learning approaches (such as the IAF) was not reflective of many participants' experiences. Instead, many families engaged in a process whereby the dictates of their context and specific arts project led to the flexible enactment of some, and sometimes all, of the four main processes: the development of an arts project or learning episode, the enrichment of artistic skills and understanding, reflection on learning, and engagement in creative activity. A model to reflect these processes as interrelated and contextually-dependent was thus generated. This model highlights that the four identified processes utilised by participants for arts

teaching and learning were engaged with flexibly in response to each family’s context (see Figure 16).

Table 14 Beta cycle survey responses regarding use of the Australian Curriculum: The Arts

Please indicate the response that best reflects your general approach to arts learning

Answer choices	Responses
We don’t intentionally structure arts learning, but provide resources, time and support to allow our children to explore the arts according to their own interests	3
We plan arts learning that aligns with our children’s interests.	6
We try to follow the Australian Curriculum: The Arts and modify learning to meet our children’s interests	2
We plan arts learning according to the Australian Curriculum: The Arts	1
Other (please specify)	3
Total	15

Other (please specify)

1. We both provide support for children's interest AND plan learning. The Australian Curriculum is irrelevant to our learning (Respondent #21)
2. I am a practicing artist so we naturally explore many areas of the arts (Respondent #19)
3. We follow a curriculum not aligned with Australian Curriculum but one that incorporates the arts (Respondent #13)

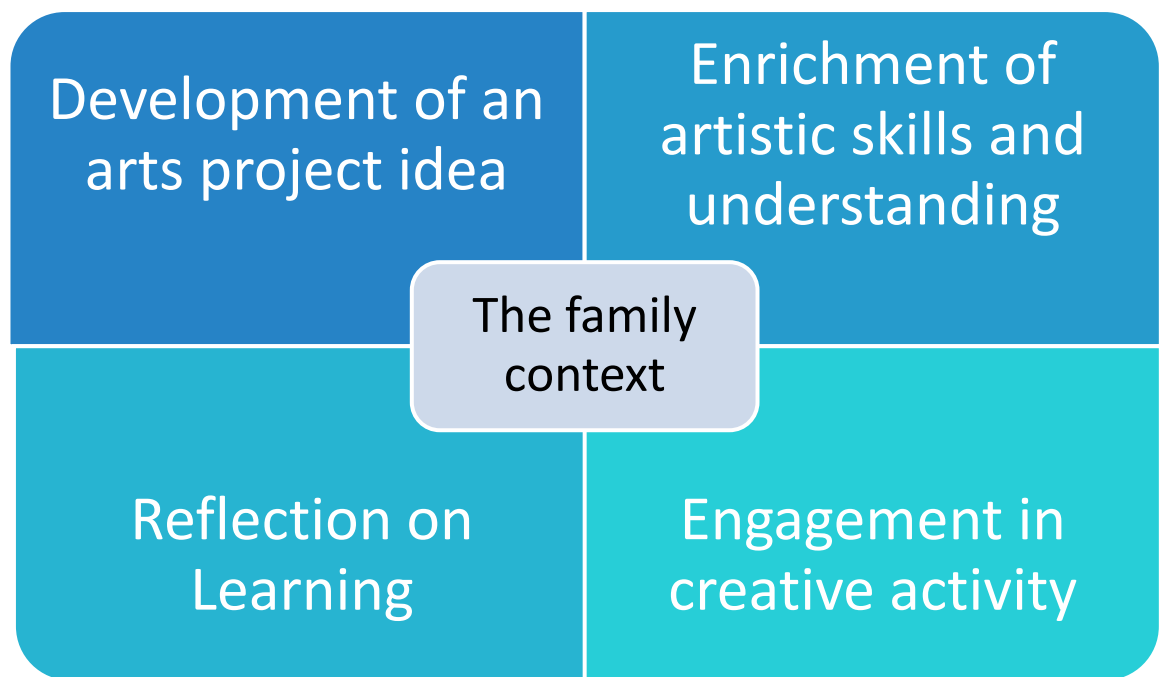


Figure 16 Major processes in home educators' approaches to creative arts learning

The process of mapping participants' approaches to arts learning helped to identify that, whilst the changes at the end of the Alpha cycle were appreciated, the IAF required restructuring in order to better reflect processes naturally engaged in by home educators. As such, more targeted strategies that were reflective of practices parents/carers were employing in arts teaching and learning would need to be developed.

Implications for future research and development:

- Re-design the IAF based upon newly developed understandings of home educator's approaches to arts teaching and learning;
- Develop strategies to scaffold the integration of arts learning into other areas of learning; and
- Ensure that the website does not preclude a non-integrated engagement with arts learning if parents/carers desire to focus solely on the arts.

The mapping of participants' approaches to arts teaching and learning and the development of a model to explain new understandings that generalised these

processes provided an important foundation for extensive re-evaluation of the IAF, explored later in this chapter. Further, this process also contributed to an evaluation of authentic arts learning, and opportunities to enhance this within participant approaches. I now turn to this evaluation, which explores strategies to enhance authentic arts engagement.

7.2.4 Research goal 4: Develop strategies to enhance authentic arts engagement

Mapping participants' approaches to the facilitation of arts learning in light of their espoused theory and theory-in-use provided a helpful means to assess the authenticity of arts learning processes. According to the *Australian Curriculum: The Arts: Introduction* (ACARA, 2017), a quality approach to arts learning will include two interrelated strands: *Making*, wherein students are provided with opportunities to develop practical skills regarding arts techniques and processes, and *Responding*, which provides opportunities to evaluate, analyse, and interpret each of the art subjects. Mapping the arts learning process of the interview participants highlighted that families engaged consistently with the *Making* strand, but tended to engage less with the *Responding* strand.

Research shows that a similar dynamic is occurring in schools, where some teachers tend to focus more extensively on *Making*, and less so on *Responding* in their arts teaching practice (Davis, 2008; Ewing, 2010; Ewing & Gibson, 2015). Providing students with opportunities to view artworks and live performances is extensively recommended in the arts syllabus of most Australian states, and has been related to the development of children's aesthetic sensibilities and sense of wonder (Dinham, 2017). However opportunities to respond to the artwork of others has been found to be "underused and undervalued as a pedagogical tool by Australian teachers" (Ewing, 2010, p. 27). It is suggested that this stems from poor pre-service teacher education which fails to develop a pre-service teacher's aesthetic sensibility and recognition of their own creative potential, out of which they can facilitate meaningful learning for their students (Ewing & Gibson, 2015; Garvis & Pendergast, 2011). Emerging findings from this project regarding the propensity for parents to overlook opportunities to respond to artworks aligned with findings regarding classroom

teachers. It further raised questions regarding the relationship between home educator's own arts content knowledge their ability to “transformation of their disciplinary knowledge into a form of knowledge that is appropriate for the students they are teaching” (Garvis & Pendergast, 2010), and the subsequent authenticity of the arts teaching practices.

These findings highlighted the need to stimulate and support engagement with opportunities to fulfil the *Responding* strand, and generated reflections on how the website could more effectively facilitate this, and more effectively stimulate home educating parents' own aesthetic sensibility. Dinham (2017), identifies a number of hallmarks of authentic arts learning which were explored in Chapter 2 and which contribute to my own understanding of a quality approach to arts learning. These hallmarks provided a more focussed means to examine the processes employed by home educators and to identify opportunities to extend authentic arts learning through the website. The key elements Dinham (2017) identifies as fundamental to an authentic arts approach include the provision of opportunities to develop:

- creative thinking and ideas development;
- applied understanding of art concepts, art literacy, and art skills;
- imaginative interpretation and self-expression;
- cultural connections to the wider world of art; and
- opportunities for reflective thinking and responding.

These qualities align closely with four characteristics of quality in arts learning identified by a group of Harvard researchers (Seidel et al., 2009), where “quality” arts learning was found to include or generate:

- all-encompassing engagement;
- involvement with authentic, artistic processes and materials;
- an exploration of ‘big ideas’ about both art and human experience; and

- direct experiences with completed or in process works of art (p. 19).

The four major processes in home educators’ approaches to arts learning identified in Figure 16 were cross-referenced with the hallmarks of an authentic approach to arts learning described by Dinham (2011) and quality arts learning described by Seidel et al. (2009) in order to ascertain the potential for the identified processes used by participants to fulfil a quality arts education. Positively, the descriptions of authentic or quality arts learning by Dinham (2011) and Seidel et al. (2009) could be aligned with the learning processes engaged in by home educators (see Table 15), although I recognised that alignment of these do not imply that authentic processes were actually occurring. Nevertheless, the *potential* for these four processes to facilitate quality or authentic arts learning was evident.

Table 15 Comparison of approaches to arts learning

Major processes of home educators’ approaches to arts learning	Features of authentic arts learning as identified by Dinham (2011)	Features of “quality” arts learning as identified by Seidel et al. (2009)
Development of an arts-rich project idea	<ul style="list-style-type: none"> • creative thinking and ideas development (if the child is invited into the development process) 	
Enrichment of artistic skills and understanding	<ul style="list-style-type: none"> • applied understanding of art concepts, art literacy, and art skills • cultural connections to the wider world of art 	<ul style="list-style-type: none"> • involvement with authentic, artistic processes and materials • an exploration of ‘big ideas’ about both the arts and human experience
Reflection on learning	<ul style="list-style-type: none"> • opportunities for reflective thinking and responding 	<ul style="list-style-type: none"> • an exploration of ‘big ideas’ about both the arts and human experience • direct experiences with completed or in process works of art
Engagement in creative activity	<ul style="list-style-type: none"> • creative thinking and ideas development • imaginative interpretation and self-expression • applied understanding of art concepts, art literacy, and art skills 	<ul style="list-style-type: none"> • involvement with authentic, artistic processes and materials • all-encompassing engagement

As identified in the previous section regarding common approaches to arts learning, many participants engaged to some extent in the enrichment of artistic skills and understanding, and reflection on the learning activity/project.

However it was widely acknowledged that these aspects of learning were often conducted in a cursory manner, and even overlooked unless the parent's own confidence with that specific art subject enabled important understandings to be explored via domestic conversation, which again aligns with research into the relationship that has been demonstrated between confidence and quality arts teaching (Alter et al., 2009a; Garvis & Pendergast, 2010). A shallow treatment of these two processes - the enrichment of artistic skills and understanding, and reflection on the learning activity/project - therefore led to the potential loss of developing children's artistic skills and understanding, including their ability to connect to the wider world of art, and their ability to enrich their learning through meaningful reflection. I recognised the significance of these two particular processes in facilitating authentic arts learning, and therefore sought to understand participants' perspectives on the processes in their practice, which would then be helpful in developing strategies to support authentic arts practices in home education contexts. These two processes will now be explored in greater depth.

7.2.4.1 Enrichment of artistic skills and understanding

The "Develop Key Skills" stage in the IAF (Beta cycle) was intended to help families develop their children's arts literacy, artistic skills and artistic understanding, which included developing cultural connections to the wider world of art. The "Develop Key Skills" page in homeiswheretheartis.com.au states:

It's tempting to launch straight into the fun, creative part once you have your project idea, but this may mean that your child misses out on developing some important skills and understandings. Pause before you complete your project to explore other quality artworks and consider what important artistic skills you need to develop for your project. Your learning will be richer for it!

Whilst this was promoted in the website, and strategies to discern and develop artistic skills relevant to different projects were provided, there was inconsistent evidence in

Project Gallery uploads of families engaging intentionally with the recommendations of this step in the IAF. Intentional development of key artistic skills and understanding in a planned arts project was espoused by only one participant: Grace, and reflection on her Project Gallery uploads indicated a reasonably consistent application of this espoused theory. Her children's dance project, which was integrated with their Science learning, demonstrated that time was allocated to the development of an understanding of movement as a tool of communication, which was then used to communicate concepts they were exploring in Science, thus enabling a richer understanding of both their Science and Dance learning. Grace's dance project provided opportunities for her children to exercise creative thinking, imaginative interpretation, self-expression and to develop dance skills. Whilst there were perhaps missed opportunities to make cultural connections and to enhance the development of dance-specific terminology, techniques and skills, this project represented Grace's first foray into Dance with her children, and her reflections on this project demonstrated her new insights into how future learning could be even more engaging:

...doing the forms (filling out the Arts project template for uploading to the Project Gallery) absolutely made me reflect and think, 'Oh we could have done this!' It does then give you an idea of how to extend it the next time. (Grace)

At the time of the Beta cycle interviews, Grace's contributions to the website engagements were the only participant examples of the *intentional* enrichment of artistic skills and understanding, however instances of *implicit* enrichment were noted during two observations with other participants. Eve's story, earlier in this chapter, was one such example, whereby her conversation with her children during the creative process naturally explored relevant arts concepts. Similarly, Twilight espoused a strong belief in the importance of developing her daughters' artistic skills and knowledge, which she acknowledged were largely covered during her daughters' outsourced private lessons in Music, Visual Art, Dance and Drama. Her uploads to the Project Gallery did not provide evidence of intentional enrichment of artistic skills and understandings, however during the observation of an arts lesson with her daughters - during which her daughters were completing a watercolour artwork - a degree of implicit development of art-specific skills was noted. Twilight sat with the girls, providing context-relevant guidance regarding tips for enhancing their

watercolour technique and colour choice. Similar to Eve's story above, Twilight did not plan any learning activities that intentionally focused upon developing the relevant skills and understandings for each arts project. Nonetheless, discussion that arose naturally in the context of arts engagements led to natural discussion and opportunities to enrich the current arts learning.

The enrichment of arts learning through a context-related family conversation is appreciated as a natural and positive means to learning that fits well with home education as sociocultural practice and with research that shows family conversation is a means to develop situated understanding (Barratt-Peacock, 1997). However, reflection on these naturally-occurring arts conversations as a means to deepen a child's artistic skills and understanding revealed considerable scope to deepen authentic engagement when considered with respect to Dinham's recommendations for authentic learning. In particular, these family conversations relied upon parental confidence and proficiency with the arts subject being studied. Eve's experience in the visual arts provided her with the confidence to explore related skills and knowledge naturally and spontaneously with her children; however she acknowledged that a similar process was unlikely to occur across the other arts subjects in which she had no experience. Such findings resonated with Natalie, who acknowledged that the development of arts skills and understanding were often not a strong focus, and that this resulted from a lack of confidence, demonstrating the significance of context in driving the arts process:

I think it goes back to where I'm not comfortable with the skills myself. It doesn't flow naturally. Instead of me just going... 'If you're doing a speech don't just stand there, be [physically expressive].' I think that because it's not a skill that comes naturally to me, it's going to feel really regimented if I was going to try to encourage the children to do it. (Natalie)

As such, whilst family conversation was appreciated as a valuable means of engaging children in authentic and situated arts learning, it was equally seen as a strategy that required parental confidence and proficiency, and which may not adequately engage children in a breadth of authentic arts processes. However, such reflections led to

consideration of whether home educators valued authentic arts practices as highly as I did within their own practice.

Ewing (2010) notes, “the ‘qualities of quality’ in arts education have been much debated because of their complexity and subjectivity. Arts education is also highly contextualised and inextricably linked to issues of identity, purpose and values” (p. 18). Whilst I recognised that an important value I held with respect to this project was the nurturing of authentic arts processes, evaluation of the relative authenticity of home educators’ arts engagement led to reflections on the contextual values held in participant homes, which revealed that not all participants shared my views on the value of cultivating artistic skills and knowledge. Survey data in response to one question focussing on the extent to which respondents valued the development of artistic skills and understanding was varied (see Figure 17) and was reflective of the variety of approaches witnessed in Project Gallery uploads, interviews, and observations. The following figure reveals that some families did not see this aspect of arts learning as important. However, the survey also provided the option to provide further detail, and participant comments revealed that parents/carers were more likely to focus on developing artistic skills and understandings if they appreciated it as important to their children’s interests and learning.

Each of the above art subjects has its own terminology, techniques, history and skills. Developing an understanding of these can help a student to engage more fully and meaningfully with that art subject. How important is the exploration of these foundational aspects in your own arts learning with your children?

Answer Choices	Responses
This is very important to me	4
The is somewhat important to me	6
This is not important to me	4

Optional further detail to explain your thoughts:

1. Only if child interested (Respondent #21)

2. Going to that level with arts lessons seems overwhelming to me as I already struggle with carrying out my schedule to include Arts activities, and my kids resist structured learning. (Respondent #16)
3. I feel confident in the hands on stuff, but a lot less confident in the theory of much of the arts. Exploring these foundational aspects is something I am always trying to do better, so this site is perfect for that! (Respondent #5)
4. I think once the child has developed an interest in the arts they can then learn the terminology, techniques, history and skills of specific disciplines - within the context of their learning. Having said that, much of our history and geography lessons contain information on various areas in the arts world :) (Respondent #2)

Figure 17 Survey responses regarding the enrichment of artistic skills and understanding

Jean’s story was particularly resonant in demonstrating the significance of developing an awareness of, and appreciation for, the development of arts literacies. In her Beta cycle interview, she acknowledged a tendency to “gloss over” the development of artistic skills and understandings in order to get “straight to the practical” of arts learning. However, within two weeks of our interview, Jean posted her latest project in the Project Gallery in response to the website’s latest *Project of the Month: Role Play (Drama)*. Notably, Jean’s Arts Project Template which recorded the process of their project, outlined the steps she had taken to “develop key skills” in her son’s role play project, which he turned into a short film (see Table 16).

Table 16 Jean’s development of key artistic skills and understanding for a role play project

Develop Key Skills:	
Exercises to develop artistic skills/understanding	<p>We did voice exercises including practising diction and resonance (found on the Drama section of the Home Is Where the Art Is website - http://www.homeiswheretheartis.com.au/#!voice/c245t) to make sure we could hear the dialogue clearly.</p> <ul style="list-style-type: none"> • We investigated costume and prop making on Pinterest.com. • We used skills learned in a filmmaking workshop to utilise a green screen for filming (https://itunes.apple.com/au/app/green-screen-by-do-ink/id730091131?mt=8) and iMovie for editing.

- We storyboarded the narrative to make sure it made sense (we used this template - http://davidkocol.com/wp-content/uploads/2014/02/film-scene-storyboard_full.jpg)

Jean intentionally engaged with relevant artistic skills and understanding to enrich her son's ability to express concepts and ideas through role play. This shift from her former thoughts on "glossing over" such a phase of learning demonstrated a significant positive growth in her approach to arts learning. This shift had occurred following our interview. In an email, Jean stated:

After our meeting I decided to investigate the resources section of your website in detail. I went through the drama section and started noting a few things that I thought could help us with our project. ... It was a really good way to approach it actually, and made me feel like the project was a well fleshed-out activity, rather than a 'fly by the seat of our pants' kind of thing ;-). It also meant that Mark was able to reflect more critically on his final piece, which was really helpful as he will bring this insight to future drama/film projects... [T]alking to you about this stuff made it seem less daunting, and also made me realise just how much richer the learning could be. (Jean, personal communication, October 22, 2015)

My discussion with Jean on the development of artistic skills and understanding during our interview comprised only a small portion of our hour-long interview. I surmised that it was not so much *what* was discussed during our interview, but rather that this brief conversation raised Jean's awareness of the benefits of – and potential strategies to – deepen her son's artistic skills and understandings in the course of his various arts projects, which then caused her to make use of the website resources with a stronger focus. Such reflection led to an important recognition for the future direction of the website: *raising awareness of the benefits of - and simple strategies to - deepen engagement with the arts through the enrichment of artistic skills and understanding was key to assisting parents/carers to engage more authentically with the arts in their children's education.* The value of a clearly structured arts learning template on which

parents/carers could plan and record their learning as a means to raise awareness was once again affirmed.

7.2.4.2 Reflection on learning

The second area highlighted through analysis as an opportunity for enriching authentic arts learning processes was the noted absence of intentional reflection upon learning among participants. Whilst three participants espoused some form of reflective practice through mapping their approach to arts learning in the context of discussing the “Reflect” stage of the IAF (see Appendix M), they acknowledged that this generally only occurred when the parent was documenting their child’s learning for registration purposes. Children were rarely included in the reflection process, meaning that the benefits of reflection for children on their own learning were not being experienced. Eve espoused the inclusion of some form of reflection with her children, although acknowledged this occurred sporadically and in a fairly unstructured and unintentional manner, as outlined in the previous section. Similarly, Natalie acknowledged the limited nature of her reflection with her daughter. She stated, “The only [reflection] would be, ‘What do you like about it?’ Or, ‘Which bit do you like the most?’ That would be about it.” Grace’s responses provided insight into why most families might overlook the reflection process:

I think it’s not a natural process. It’s not really something that we normally do unless something goes wrong. And then we look back and go, ‘Why did that go wrong or how did that happen?’ If something goes well for you, and you think you’ve achieved something, you don’t then go, ‘Let’s go and have a look at it, or let’s analyse.’ ... You just kind of go, ‘Oh that’s good!’ and move on. So you really need someone to kind of push you – gently – in that direction. ... In home-schooling, there is no one going, ‘You have to do this’. And unless you have a teacher’s background, and you’re used to filling out all the different forms - things that keep you kind of on track - you can neglect that a little bit.
(Grace)

It was noted that, during interviews when discussing the importance of reflection, three participants did sense some form of awakening as to its significance in learning. In particular, Grace’s comments highlighted how the simple act of being reminded of the

importance of reflection was beneficial. Whilst she had not reflected with her children and referred only to her own reflective process, her growing understanding of its value was clear:

[Reflection is] not really something I do. Like I'm not someone that sits at the end of the week or every so often goes looks at what we've done and then works out the next bit. I kind of do it in my head, which is not the best way to do it. ... But doing the process you've got with the forms (the Arts Template used to share learning with other families in the Project Gallery) to show other people really made me look at [our arts project] in depth. And look at what we got out of it. And what we could have maybe added to it. You know it really made me analyse it in a much finer detail... once I started doing it I sort of thought - this is quite important! (Grace)

Through the interview process, I was able to discuss the benefits of reflection when it included children, which a number of participants appreciated. Jean's "Horrible Histories" project, which was uploaded following our interview in which the benefits of reflection were discussed, highlighted an intentional reflective process with her son. This was something she had acknowledged in her interview that she had not previously done.

Horrible Histories: Role Play

Reflection activities:

- Upon watching the clip back Mark felt like he would work on his clear speaking a bit more next time, as he felt like he stuttered a bit at times.
- Mark felt like the exercise really highlighted how the way we view our history really depends on who is telling it.
- From a technical perspective we both felt like next time we would allow more time for editing, and would pay more attention to the transitions between scenes. We

would also try to incorporate different shots, such as extreme close-ups and point of view shots, to give a bit more depth and variety to the video.

The mapping of participant approaches, identification of areas to enhance authentic processes and analysis of this data raised two insights regarding reflection on learning: 1) for many participants, reflection is not necessarily something that occurs naturally, however 2), when reminded of its importance and encouraged to engage in guided reflection, its benefits are more likely to be experienced and appreciated. A means to elevate the importance of reflection in enriching the learning process and a means to guide this process in a straightforward and contextually-relevant manner were thus sought. In particular, I recognised that participants' extensive adoption of the Arts Planning Template provided in the website provided a potentially useful direction to foreground and scaffold these processes. Strategies that were developed are explored later in this chapter.

The following **implications for next phase of research and development** were identified:

- Consider ways to foreground the significance of – and strategies to – deepen authentic arts skills, understanding and meaningful reflection on learning; and
- Consider how authentic arts processes can be further stimulated and supported through a re-designed template for planning and recording arts learning.

7.2.5 Summary of Beta cycle research findings

The Alpha cycle identification of research goals for the Beta cycle helped to direct the Beta cycle data analysis and assisted in the evaluation of the changes made at the conclusion of the Alpha cycle. Through this process, I identified the changes that were beneficial, and aspects of the learning environment that required further improvement in order to meet the project's goal of supporting and enhancing authentic arts learning in Australian home education. The Beta cycle analysis confirmed that the online CoP was an important feature of the learning environment that should be retained and nurtured, and the *Project of the Month* and webinars were both confirmed as valuable changes to the website that promoted engagement in the online CoP and helped to

stimulate more authentic arts engagement. However, further opportunities were identified to support and enhance authentic arts practices, prompting a return to the data and relevant literature to develop appropriate responses to these findings. Importantly, I identified that the IAF was not reflective of the processes that home educators were naturally engaging with regarding arts teaching and learning, and therefore needed restructuring in light of this new understanding. A re-evaluation of this framework was then useful in better supporting home educators' engagement with the arts in an authentic manner.

7.3 Proposal and implementation of changes to the learning environment at the conclusion of the Beta cycle

In response to the implications which arose from the Beta cycle data analysis, a series of changes to the website's learning materials were proposed. In a similar process to that undertaken during the Alpha cycle (see Appendix L), these proposed changes were evaluated according to their viability, legitimacy and efficiency (McKenney et al., 2006) prior to implementation. The changes were implemented as follows:

- Foreground the online CoP and its benefits to arts learning through a through a new home page, site menu, and re-structured website;
- Re-structure and re-name the IAF, and foreground its benefits on the revised home page;
- Foreground authentic arts processes on each arts subject page and learning activity;
- Foreground authentic arts processes through the re-development of an arts template for planning and recording arts learning; and
- Re-configure the website to foreground strategies to integrate arts learning with other curriculum areas.

These amendments are now detailed, and help to illustrate major aspects of the design at the commencement of the Gamma cycle.

7.3.1 Foreground the online CoP and its benefits to arts learning through a new home page, site menu, and re-structured website

With the inclusion of new initiatives such as the *Project of the Month* and webinars, I realised that the inclusion of such additional features could make the website's purpose and function confusing to users. I therefore endeavoured to simplify and clarify how the different features of the website worked together, and how members could utilise them according to their unique needs. As such, a more streamlined homepage was recognised as crucial to attain this goal, and insights into the elements of an effective web page were sought (Kolowich, 2015; Meher, 2015). Alpha cycle data had highlighted participants' preference for images rather than words to provide a simplified overview of information where possible. These understandings were used to develop a new home page which focussed on showing the interrelationship of the site's features and a new site menu that permitted access to the site's main features from every page (see Figure 18).



Figure 18 Gamma cycle home page

7.3.2 Re-structure and re-name the IAF, and foreground its benefits on the revised home page

The development of a model to explain arts teaching and learning processes commonly used by home educators (Figure 16) stimulated an extensive re-structuring of the IAF. Based upon new understandings regarding the fluid and context-responsive approach that home educators engaged in, the linear IAF that I had previously adopted was discarded. Instead, a more “open”, non-sequential approach that engaged with all four of the identified major processes of arts learning (which included project ideas development, the deepening of arts learning through development of key skills and understandings, hands-on creative learning, and meaningful reflection) was used as a foundation for the re-structured framework (see Figure 19). Importantly, in response to participant feedback regarding confusing terminology, the IAF was re-named the “Guide to Arts across the Curriculum”, which was considered to be much more representative of its function and utility, and met with the approval of participants. Instead of sequentially following steps to engage in arts learning which may not necessarily align with natural processes used in the home, this new Guide to Arts across the Curriculum (GAAC) operated as a simple “reminder” of important elements in rich arts learning, and linked to strategies, ideas and resources in the website to scaffold each of these four processes.



Figure 19 Guide to Arts across the Curriculum webpage

7.3.3 Foreground authentic arts processes on each arts subject page and learning activity

Beta cycle findings highlighted that families were more likely to engage in authentic arts processes if they understood and appreciated the value of these to their children's learning. Equally, parents/carers were more likely to focus on enhancing their children's arts literacy through the development of artistic skills and understanding if they felt a measure of confidence in that particular art subject. As such, I recognised the need to foreground authentic arts processes more extensively throughout the website, and to provide adequate scaffolding such that a lack of experience or confidence in a given art subject would not preclude attempts to engage meaningfully and authentically with it. This was addressed in a number of ways:

- The GAAC supporting pages provided clear reference to, and strategies for, engagement with relevant skills and techniques, in addition to critical engagement with existing artworks (see Figure 20);
- Instead of the former focus on project ideas for each arts subject, the website was updated to foreground *strategies* to deepen learning for each art subject, after which project ideas were presented. This was achieved through foregrounding the significance of “deepening” arts learning at the top of each Art Subject page (see Figure 21); and
- Resources to guide meaningful reflection on the wider world of artworks for each art subject were provided on each Arts Subject page.

“Develop your Arts Learning” webpage in GAAC



Figure 20 Strategies and resources to develop artistic skills and understanding



Figure 21 Foregrounding of strategies and resources to support artistic skills and knowledge for each art subject

7.3.4 Foreground authentic arts processes through the re-development of an arts template for planning and recording arts learning

Given that all uploads during the Beta cycle had made use of the Arts Planning Templates provided on the website, I recognised the significance of a template as an important source of guidance. A template that clearly addressed authentic arts processes represented a primary means to “raise awareness” of important elements of authentic arts learning, and hopefully stimulate parental engagement with the strategies provided in the website to stimulate and nurture such engagement. In particular, participant comments about the value of having their awareness “raised” on specific issues highlighted the value of a template in stimulating an intentional focus on these elements of the arts-learning process. Whilst I appreciated that some families may not necessarily view the template until it was time to record their learning, these “reminders” in the arts template would nevertheless serve as helpful learning and potentially stimulate increasingly authentic processes in future projects. The final template was structured around the four elements in the GAAC (see Figure 22).

Home is where the ART is

Our Arts-rich Project Overview

Project Title [Give your project a title]

Our project overview:
[Give a succinct overview of your project here so other families can get a clear idea of what you did]

Curriculum Links
[You could list all the subjects you integrated in your project here, or even include the specific curriculum descriptions if you choose]

Resources we used
[Please list any helpful books, tutorial videos, links, materials etc that you found useful in your project]

How we deepened our learning:

In the Arts
[List any research, learning activities, or conversation that you engaged in to ensure that you deepened your learning and skills in the Arts. See the "Deepen your Learning" page for ideas]

In other subject areas
[List any research, learning activities, or conversation that you engaged in to ensure that you deepened your learning and skills in the other subject areas. See the "Deepen your learning" page for ideas]

Getting Creative:
[Were there any important steps we went through to develop our artwork/ performance/ final piece?]

When we reflected on our project, here's what we learned:
[What reflective strategies did we use during and after our project? There are great ideas on the "Reflect on your learning" page. What did we learn through reflection?]

Figure 22 Gamma cycle Arts Project Template

7.3.5 Re-configure the website to foreground strategies to integrate arts learning with other curriculum areas

Beta cycle data showed support for an integrated approach to arts learning; however I also recognised the need for additional support for families lacking confidence or proficiency in the arts. As such, specific ideas and resources to support arts integration with other learning areas were provided on each Arts Subject page, in addition to each

arts activity page (see Figure 23). Importantly, whilst integration was affirmed as a helpful means to engage with arts learning by most participants, the way that the website was structured meant that participants could still access and make use of all resources from a pure arts focus if they did not choose to integrate their children's arts learning.

Integrate Media Arts with other subjects:

Print activity ideas

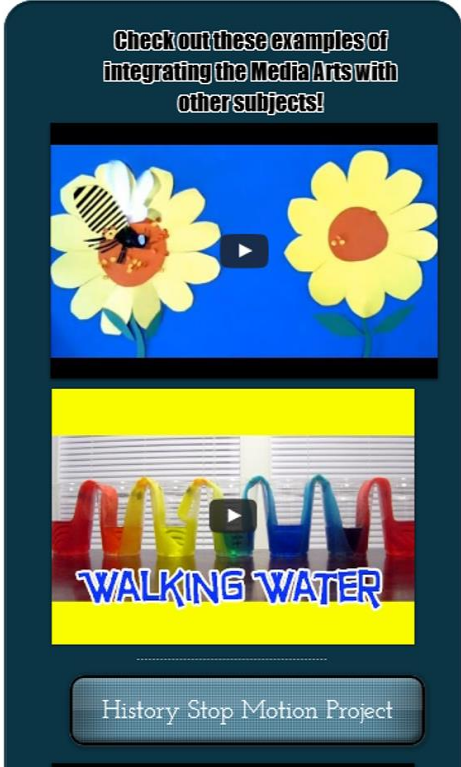
Science –

- Develop a stop motion animation or short film to express your learning in whatever aspect of Science you are currently studying. Try to bring interest and energy to the project through an interesting narrative approach to the Scientific concepts.
- Create a "how to" film for a science experiment (remember to focus on the aesthetic qualities of your film!)
- Create a comic strip that communicates a Science experiment (maybe even one that goes horribly wrong, with all the explosions!)
- Develop a poster about a scientific concept or principle being studied (eg. Seasons)
- Photograph elements of the natural world from a number of angles and framing options. Discuss which ones best communicate their natural features.
- Create a photographic story of a science experiment, showing details of each step.
- Create a soundscape of a particular environment by recording and overlaying a variety of recorded environmental sounds.
- Create a radio news story about a natural disaster
- Create a Powerpoint presentation that documents lifecycles, seasons, magnetic forces, planetary movements, an experiment etc....

History –

- Create a script for a re-enactment of a moment in History, complete with costuming. Film and edit it!
- Create a short film or stop motion animation about a theme that has arisen through your studies, such as democracy, freedom, war.

Check out these examples of integrating the Media Arts with other subjects!



History Stop Motion Project

Figure 23 Foregrounding integration ideas and strategies

7.4 Summary of design changes

The above design changes were implemented and made available to the participants by late September 2015, in readiness for the final term of the traditional school calendar, thus commencing the Gamma cycle of homeiswheretheartis.com.au.

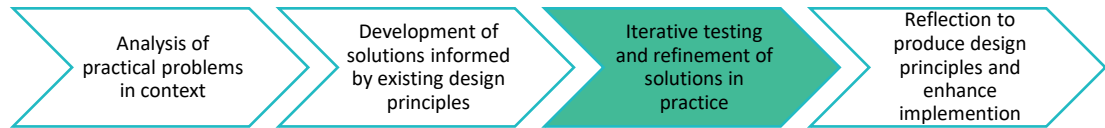
7.5 Chapter Summary

This chapter has demonstrated the approach taken to the collection and analysis of data during the Beta cycle of homeiswheretheartis.com.au, which occurred from June to early September 2015. It has highlighted the inductive nature of the research approach, and how emergent findings contributed to the evolution of the website in

response to the specific needs and approaches to arts learning of participant home educators. Importantly, in this phase, clearer insights into the nature of the developing CoP in homeiswheretheartis.com.au were revealed, showing that the varying degrees of participant engagement with the collaborative aspects of the online community aligned with wider research into the general nature of participation in CoPs. Nevertheless, participant feedback regarding specific features of the website helped to identify further strategies to continue to grow the online CoP and modify website resources to better meet participants' needs. In addition to these understandings, deeper insight into the processual approaches to arts learning of participant home educators was helpful in identifying teaching and learning processes that appeared to be common among interview participants. This provided more specific direction for the nature of scaffolding resources in homeiswheretheartis.com.au, whilst also demonstrating areas that required additional support in order to promote authentic arts practices. In response to Beta cycle findings, homeiswheretheartis.com.au was again modified and released to members for the final research iteration: the Gamma cycle.

CHAPTER 8

Effectiveness evaluation - Gamma cycle



The third and final cycle of evaluation and refinement of homeiswheretheartis.com.au

In this chapter I detail the findings from the Gamma design cycle. As the final iteration for this research project, Gamma cycle analysis had a dual focus: to identify, evaluate and implement changes to improve the website in response to findings, and to seek insights into the primary research question: “How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?” I commence with an overview of the Gamma cycle data sources. The findings are then explored, with discussion into how these provide insight into the suitability of the draft design principles. The chapter ends with an overview of the final website that was released to the public following closure of the research environment.

8.1 Gamma cycle data sources and challenges

As with the previous two iterations of homeiswheretheartis.com.au, data were collected during the Gamma cycle via an anonymous internet survey, five semi-structured interviews, two observation sessions of arts learning in interviewee homes, and site statistics to track the number and frequency of site visits. Additionally, participant contributions to the website forum, Project Gallery, and webinars, as well as participant emails, and personal observations and reflections as the researcher contributed further data.

In previous iterations, challenges emerged with respect to some data sources. Following the low survey response rates in the Alpha and Beta surveys, I explored research into strategies to increase response rates (Kaplowitz, Lupi, Couper, & Thorp, 2011), and intentionally shortened the Gamma cycle survey to an estimated

completion time of three minutes in the hope that this would encourage more participants to engage. Of the 85 registered participants in the Gamma cycle, 21 survey responses (25%) were received, 20 of which were complete (24%); the highest return rate during the project. Challenges in previous iterations with unsatisfactory site statistics led to the adoption of Google Analytics, an additional site statistics package that provided information on the most visited pages within the elements of the site under my control. Given that the Project Gallery and Forum pages were hosted on a sister site (see section 5.3.4) by a separate website designer whose services did not offer detailed analytics of page popularity, the site traffic of these two pages could not be ascertained alongside pages within my own domain. Nevertheless, the ability to see the most popular pages within my domain permitted helpful insights into how participants were using the website.

Additional challenges arose during the Gamma cycle, including the impact of conducting research during the final months of the school calendar year when families were busy with end-of-year activities, and “winding down” as Christmas approached. This had a visible impact on website interaction, with a number of families commenting that they had been so busy at the year’s end that intentional engagement with much of their schooling had relaxed in focus and intensity. Given that much of the Gamma cycle coincided with the final three months of the year, and that the latter half of December was viewed as vacation time for most families, the Gamma cycle was shorter than previous iterations and participant engagement with the website was noticeably lower. This drop in activity is highlighted in the site statistics from the Beta and Gamma cycles in Figure 24.

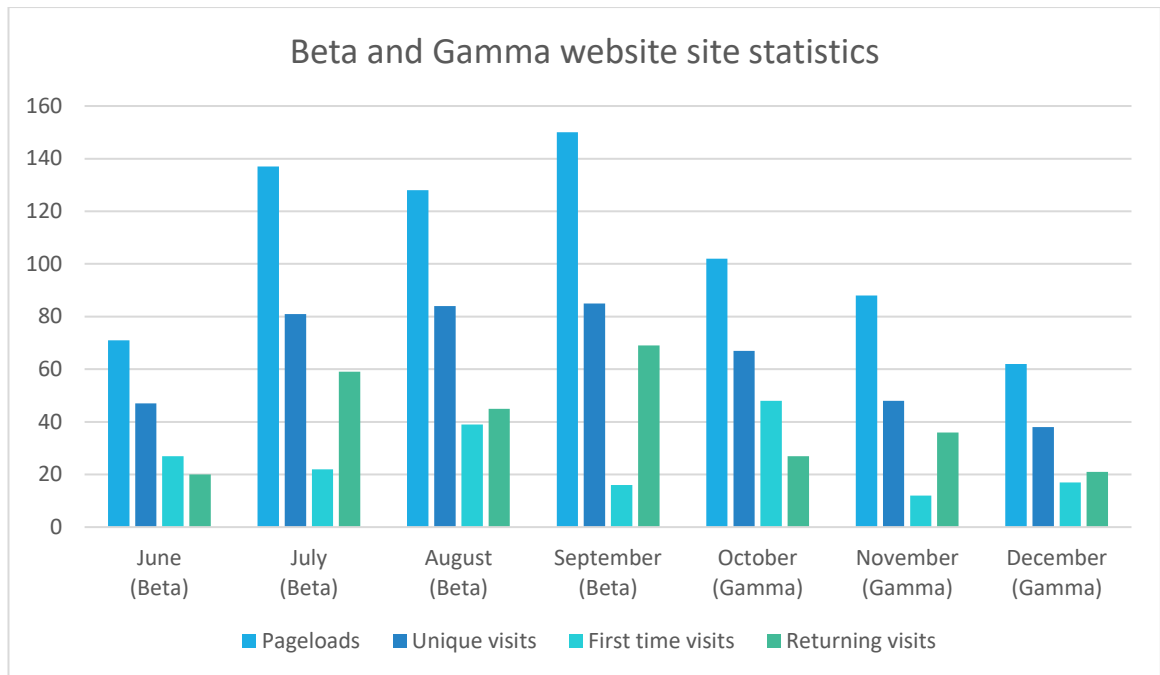


Figure 24 Comparative site hits Beta and Gamma websites

Participant activity in other aspects of the research was also discernibly lower. There were a smaller number of forum posts and Project Gallery uploads. Additionally, only two of the four families who had agreed to an observation of an arts learning episode actually completed one in conjunction with their final interview. One family had already commenced holidays, and even though an arts activity had been planned by the mother, the children did not wish to have their free play interrupted in order to participate. A second family had simply not had time to prepare an arts learning episode at that busy time of year. In spite of these challenges, rich insights emerged from other data sources, including interview data, participant communication via email, and the participant contributions to the collaborative aspects of the website. These data sources provided a fuller picture of participants’ perspectives and website use, and highlighted that external factors, rather than dissatisfaction with the website and online CoP, had led to lower engagement.

8.2 Gamma cycle findings

Changes made following the Alpha and Beta iterations of homeiswheretheartis.com.au had stimulated significant alternations to the layout, visual design, and content of the website, and participant feedback regarding these changes was overtly positive. The final research sub-question was particularly important in guiding the analysis in this

final iteration of the website: “How is the project’s online learning environment effective for home educators in facilitating a quality arts education?” This question provided the lens through which I approached data, searching for insights into participant perspectives on aspects of the website that were helpful, unhelpful, or in need of further amendment to support their facilitation of arts learning. Additionally, I wanted to develop an understanding of any relationships between aspects participants identified as useful and the project’s draft design principles. This was to determine their effectiveness for the design of an online arts learning environment for home educators, which would be the focus of the upcoming final research phase: Reflection to produce design principles.

Data analysis was approached inductively, wherein significant themes were allowed to emerge rather than approaching the data analysis process with preconceived hypotheses. Through my immersion in the data, reflective journaling and a search for particulars, patterns, and significant themes, two categories were identified that helped to determine the elements of a useful online arts learning platform for home educators: *Arts learning resources*, and *Community*. The category of *Arts learning resources* pertained to important characteristics of the website’s resources that made them suitable for home education contexts and for the stimulation of authentic creative arts engagement for home educating participants. The category of *Community* embodied insights regarding the effective features of the online Community of Practice (CoP) for home educators, in addition to reflections on aspects for improvement.

Data and findings in relation to *Arts learning resources* and *Community* are now explored.

8.2.1 Arts learning resources

The Alpha and Beta cycles of data analysis had focussed on developing an understanding of how participants engaged with arts teaching and learning, which led to the development and refinement of creative arts learning resources specific to participants’ needs. This process primarily stimulated the development of the “Guide to the Arts across the Curriculum” (GAAC); a non-linear, flexible guide that assisted home educators in designing learning tasks that were relevant to their context, which

was then supported by creative arts learning resources throughout homeiswheretheartis.com.au.

At the completion of the Gamma cycle, a range of data sources, which included interviews, observations, survey data, website statistics, and Project Gallery uploads provided insights into the characteristics of arts learning resources that were deemed useful to participants in aiding their facilitation of arts learning in their homes. The following beneficial characteristics of arts learning resources for home educators were identified. Participants found that resources were most beneficial when they were:

- **Enriching:** resources enriched, stimulated or reinforced an appreciation of, and ability to engage meaningfully with authentic arts learning;
- **Achievable:** resources empowered and supported parents/carers to feel that arts learning was achievable, regardless of their personal skill-level via practical, skill-based examples and easily-implemented arts learning experiences;
- **Directional:** resources provided a flexible structure that inspired parents/carers with ideas and a direction for planning and reporting on arts learning;
- **Adaptable:** resources presented flexible ideas that could be adapted by individual families to reflect their unique pedagogical approach; and
- **Comprehensive:** resources provided adequate information and support to guide the intended learning.

Each of these characteristics will now be explored.

8.2.1.1 Enriching

Data analysis from the Alpha and Beta cycles had highlighted that families were more likely to engage in authentic arts processes if they understood and appreciated the value of these to their children's learning. Equally, parents/carers were more likely to focus on enhancing their children's arts literacy through the development of artistic skills and understanding if they felt a measure of confidence in that particular art

subject. Within the Gamma cycle data, participants frequently referred to their sense of being ‘awakened’ throughout the project to the significance of the Arts as an important learning domain, and of their new, or renewed, appreciation of the importance of engaging with the Arts authentically and meaningfully. They appreciated the way that the website and the arts resources within it foregrounded the importance of deepening their arts learning by engaging them with important skills and understandings, which they felt enhanced their understanding of the significance of the Arts and their ability to engage in a more authentic manner.

Jean used the website resources to plan her son’s arts projects throughout the year, stating that these “helped me to give more depth to something that would have just been a quick little craft project... to explore in a lot more depth and get a good theory behind it.” Other families felt that their engagement with homeiswheretheartis.com.au awakened them to the value of natural arts engagements that were already occurring in their learning, helping them to build upon these more intentionally and deeply. Twilight, who felt very happy with her children’s arts learning prior to her involvement as a research participant, said,

I like that you made me think about what I’m actually doing because prior to that I probably would just do it and not think so much about it. ... With my involvement in this project, it’s like I’m being forced to go, “Okay, am I doing everything in line with the curriculum?” Because I might look at the curriculum and go, “Yes... I’m doing that”, but to go, “Are you explaining it properly? Are you reflecting on it? Are you seeing how you can improve it? Using the proper terminology?” ... I probably do that without thinking about it but I think it’s important to me through this project to be aware that that’s what I am doing; and make the children aware of that. (Twilight)

A survey respondent commented, “It has helped immensely with my planning and depth of learning, particularly with regard to arts theory” (Respondent #7). During her interview, Grace commented, “You’ve really helped me to appreciate ... all of the Arts and how valuable they are”. Similar feedback was received from all interview participants, emphasising an important feature of arts learning resources: foregrounding the value of the Arts encourages more authentic arts engagement.

Evidence of participant “growth” in enacting authentic arts practices, was visible in the Gamma cycle Project Gallery uploads and in the participant observations. As compared to Alpha cycle project uploads which predominantly tended to outline a basic arts activity, almost every Gamma cycle upload included evidence of the intentional development of artistic skills and knowledge. Examples included Grace’s Ned Kelly mock interview, which integrated History with Media Arts and Drama, and expanded upon her children’s Media Arts literacies by critically viewing news interviews, and discussing the media strategies used to develop a particular perspective on an issue. These understandings were then used to develop, perform, film and edit a mock interview that utilised Media Arts literacy and explored the perspectives of different historical characters involved in the Kelly Gang’s Glenrowan siege. Jean’s Mixed Media Christmas art project included discussion of colour theory, active learning on how to develop three-dimensionality using value, and the development of watercolour techniques. These examples, and other Gamma cycle uploads, included meaningful evidence of reflection throughout, or at the end of, the respective arts projects. Such insights provided a positive indication that participants were not only appreciating the value of the arts, but were enacting approaches to arts learning that engaged with their chosen art subjects authentically.

Based upon these findings, the following relationships were identified between arts learning resources that enrich parental understanding of the value of the Arts and the draft design principles (Table 17).

Table 17 Relationships between resource characteristics and draft design principles

Draft Design Principles	Arts learning resources that enrich parental understanding of the value of the Arts
1: Situate learning tasks in the family’s CoP	Resources that foregrounded the value of the arts increased a family’s likeliness to see opportunities naturally arising in the home that could be related to arts learning.
4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts	Foregrounding the significance of authentic arts engagement in the website through visible reminders and strategies to “deepen your arts learning” was a successful and useful strategy that promoted greater appreciation of, and ability to, engage in authentic arts processes.

8.2.1.2 Achievable

Participants appreciated arts learning resources that presented ideas, examples, and achievable strategies for engaging children in arts learning experiences that could be implemented, regardless of parental knowledge, skills, or confidence in that particular art subject. A number of website features were commented upon, with reference to how these stimulated confidence and a sense of competence in their arts teaching and learning. These features included the Guide to the Arts across the Curriculum (GAAC) which replaced the Integrated Arts Framework (IAF), Arts Learning Template, Project Gallery, web-links, online meetups, and embedded video tutorials. These resources and platforms shared the similar characteristic of providing clear examples or scaffolding that helped participants to feel that the specific arts learning being explored could be achievable in their own context.

The GAAC and the accompanying Arts Learning Template (see Chapter 7) were widely acknowledged as scaffolds that made quality arts learning feel “achievable”. There was extensive agreement among interview participants that the GAAC was more reflective of arts learning processes employed in their individual contexts than the former IAF. Comments such as “I love this”, and “it’s more *me*” were common. Equally, they felt the GAAC was helpful in stimulating more authentic arts engagement in their arts teaching and learning by breaking the arts learning process into a flexible and *achievable* series of steps which were supported by arts project and activity ideas, example projects and activities, and relevant web-links. Of the GAAC, Grace stated,

It’s really made me restructure how I do a lot of the teaching – not just the Arts but when it is incorporated with other subjects as well. That whole process of getting [the children] involved in the beginning, producing [the artwork], and then also evaluation at the end. (Grace)

Only Natalie preferred the previous IAF, based upon her lack of confidence and the way that the IAF was more of a “step-by-step approach”. However, the accompanying Arts Learning Template was appreciated for the way it not only stepped parents/carers

through the phases of the GAAC, but also for the way it scaffolded the documentation of their arts learning for registration purposes and for sharing in the Project Gallery. Natalie commented that it fitted well with her “obsessive-compulsive” approach where structure was an important feature that gave her confidence, whilst Jean approached it more flexibly, using it as a prompt and “a good opportunity to have a look and see if I’m missing an opportunity to link it (the arts project) with something else”. Positively, participants were approaching the GAAC and Arts Planning Template according to their unique needs in a manner that made them feel quality arts learning was achievable. Twilight, who already possessed a strong sense of confidence in her children’s arts learning at home and through outsourcing did not make use of the template, but affirmed that it was a strong reflection of processes she put in place.

Clear and detailed examples of arts learning in action – especially examples contributed by other home educators - were especially appreciated by participants because the learning activities were achievable and relevant to home education contexts. As Grace commented, “the whole thing with home schooling is, being isolated, you don’t know what is going on in other home schoolers’ homes and what it looks like”. The Project Gallery was thus widely considered to be an important element of the website that encouraged the sharing of attainable arts learning ideas. Natalie appreciated the focussed nature of homeiswheretheartis.com.au, and that it targeted home education: “What I find with a lot of the teacher websites [is]... when you look at it, it’s got a whole lot of fluff that you’ve got to get through before you actually get to the stuff that is relevant.” Given that most existing arts sites accessed by the interviewees were aimed at teachers in formal institutions, an important characteristic that made arts learning resources more achievable was their specific design for home education contexts.

Skills-based videos which focussed on ways to teach specific arts skills and techniques were identified as beneficial resources that made such arts learning feel “achievable”, especially when parents/carers did not have confidence with that particular art subject or skill. These included tutorial videos created by myself as the website facilitator, and judiciously-chosen web-links (contributed by myself and community members) to scaffold achievable instructions in specific arts skills.

I liked the fact that you had little videos ... We stepped our way through all those vocal exercises [videos] and we got to have discussions, and you know it was still very academic and theoretical in our discussions but it was also very kinetic: lots of movement and action and talking and very hands-on. (Jean)

Interview data highlighted that for parents to feel that a quality approach to arts learning was attainable, a sufficient level of scaffolding was required; and the presentation of high quality ideas, access to skills-based instruction, and examples of arts learning – especially those generated in other home education contexts - worked together to make arts learning achievable.

Based upon these findings, the following relationships were identified between the development of *achievable* arts learning resources and the draft design principles (Table 18).

Table 18 Relationships between achievable arts learning resources and draft design principles

Draft Design Principles	Achievable arts learning resources
1: Situate learning tasks in the family’s CoP	Examples of arts learning from other home education contexts made the transfer to a parent’s own context more achievable.
5: Provide flexible scaffolding for arts learning	Resources, such as the GAAC and Arts learning template provide parents/carers with adaptable support structures which enables the development of learning that is relevant to the many facets represented in individual contexts, including the family’s philosophical approach to education, the child or children’s stage of development, interests, social and cultural world, and learning needs.

8.2.1.3 Directional

Arts learning resources that imparted a sense of direction and inspiration for arts projects or activities were valued by participants. As a broad learning domain encompassing five arts subjects, a number of participants during the project’s needs analysis phase acknowledged their sense of floundering in the “large scale of it all” (Respondent #2), feelings of “too much choice, not enough clear sequence”

(Respondent #23), and a sense that “whatever you do, you feel there is so much more you are not doing” (Respondent #47). As such, the provision of resources that imparted a sense of direction to parents/carers, helping them to focus their arts teaching and learning and reducing the sense of being overwhelmed was considered valuable.

The integration of arts learning with concepts or themes arising in current studies in other subjects or current interests in each family’s environment was appreciated by participants as a useful means to provide some direction for potential ways to engage meaningfully with the arts. Approaching arts learning through the lens of relevant themes and concepts already under study established useful ‘boundaries’ within which choices for arts learning could be directed. On each of the arts subject pages within the website, specific project suggestions that integrated learning in other subjects provided clear and flexible ideas that could serve as springboards for parents/carers, providing them with direction. Links to specific arts project ideas and strategies to deepen learning in the particular art subject then scaffolded further exploration. Eve particularly liked the printable suggested strategies for integrating the Arts with other subjects on each of the art subject pages:

I like the idea of ... “ideas for integrating each part into everyday teaching” – that’s a good idea. Because then it’s just a stepping stone to how we could use it. And that would be something I’d print out and look at: “Okay, how could I integrate it? And am I already doing it without even realising it and placing a value on it? (Eve)

Other participants appreciated not only the clearer sense of direction that integrating the Arts could provide in learning, but also that it was both achievable and enriching to learning. Grace stated,

Art wasn’t really a focus for us; it wasn’t something I thought you could integrate. Now, I can really see that it can be integrated with everything and it can really enhance your learning... I kind of look at it as a priority... particularly with my younger one who doesn’t like writing, and things like that. It can really help him to learn and show his learning in ways that are easier for him and he’ll retain the information... I’ve now got an understanding of how

to integrate the arts in a meaningful way and not just in that tokenistic way. You know, you'll focus on that depth of learning and that actual growing of the art skill as well as covering the content from other subjects. (Grace)

The *Project of the Month* initiative was widely appreciated by interview participants as providing direction for arts learning. Eve commented: "I love the idea of *Project of the Month*. You're given an idea: *Why don't you have a go this month at doing this?*" By focussing on only one or two art subjects at a time and providing a flexible outline of a project idea, the *Project of the Month* minimised parental feelings of being overwhelmed by too many choices. The characteristics of this initiative, structure and flexibility, were the same positive attributes that other participants identified about many of the website's resources, which helped them to feel that the resources in the website "narrowed down" the vast array of potential approaches to arts learning. Grace commented,

The Arts is such a huge topic; how do you cover it? [This website] gives you the structure of all the different parts. It introduces you to things you might not have thought or have come across but it gives you the whole arts curriculum in a skills-based way. (Grace)

Google Analytics, which tracked site hits and the most popular pages, revealed that the *Project of the Month* was highly influential in directing participant use of the website's resources. During the Gamma cycle, the *Project of the Month* focussed on a Visual Arts project, and site statistics demonstrated that during this time, the most visited pages, following the home page, were the *Project of the Month* page, Visual Arts page, and then the GAAC page (see Figure 25). This was a positive indication that the monthly initiative was directing or influencing parents/carers in their interactions with the website materials, and that participation in the *Project of the Month* appeared to be a reason for accessing the website.

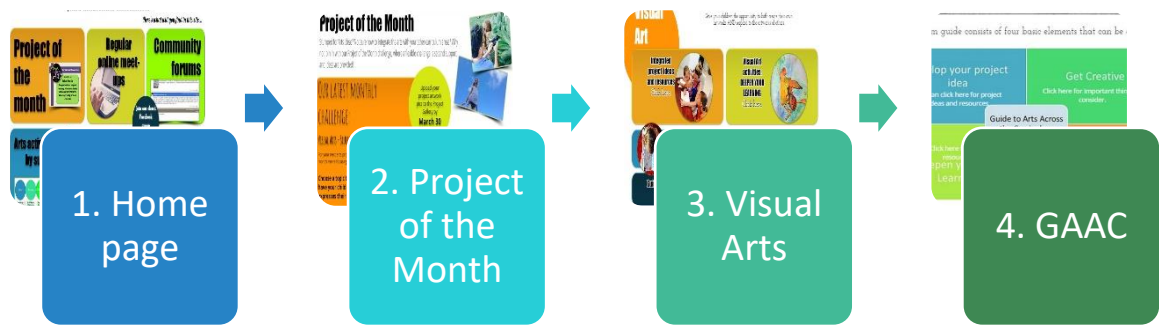


Figure 25 Most accessed pages during the Gamma cycle

Whilst participant views on other resources in homeiswheretheartis.com.au varied according to their contextual needs and approach, most of the participants appreciated the way in which a sense of direction was imparted by the GAAC (and accompanying Arts Planning Template) and “Suggestions for Integration” on each of the arts subject pages, but more importantly, how these structures were supported by informational resources in the website. A number of interview participants also commented that they found their overall engagement with the website useful in planning for future arts learning, with particular reference to the Arts Planning Template as a very useful tool, thus again providing them with a sense of direction:

I’m just getting ready to plan next year. I’m going to use your website a lot and work out [and] structure what I’m going to use at what time during the year and utilise that, whereas before, I wouldn’t have had that knowledge or mental confidence to go do that. (Grace)

I am writing ... all of the children’s plans for 2016. I used your site to get some awesome resources I could put in my plan as well as things I have already used in 2015 (and forgot!) so I could include them in my reports. (Eve)

Importantly, arts resources that provided “direction” for arts learning stand in contrast to prescriptive resources that cannot be easily integrated with the immediate learning in individual contexts, or situated within different family contexts. Instead, directional resources provide guidelines, suggestions, and a welcome sense of structure which enabled parents/carers to tailor learning according to their unique context. The key feature of resources that participants identified as helping them feel a sense of direction for their arts learning was the flexibility of the structure, whereby they felt supported

with ideas and resources to effectively design learning according to their context, in addition to a focussed environment that eliminated extraneous and distracting or confusing information.

Based upon these findings, the following relationships were identified between the development of arts learning resources that provided a sense of direction and the draft design principles (Table 19).

Table 19 Relationships between resources that provide direction and draft design principles

Draft Design Principles	Arts learning resources that provided a sense of direction
1: Situate learning tasks in the family’s CoP; 2: Integrate arts learning in open-ended projects	The <i>Project of the Month</i> , GAAC and Arts learning template all provided clear prompts that focussed upon designing learning that integrated with the family’s current interests and needs.
4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts by providing flexible scaffolding for art learning	The <i>Project of the Month</i> initiative included links to supporting resources that focussed on the development of fundamental arts skills and understanding, such that parents/carers did not need to determine these if they felt inadequate to do so. The Arts Learning Template, which parents/carers used to documents their <i>Project of the Month</i> , provided further flexible scaffolding that prompted genuine consideration of ways to “deepen arts learning” for that particular project, thus providing additional direction, without being prescriptive.

8.2.1.4 Adaptable and reflective of ways of working

The broad variety of contextual needs and pedagogical approaches represented within Australian home education necessitated the development of a website and arts learning materials that could readily be adapted by families to their unique context. With an appreciation that no definitive description could adequately represent the variety of pedagogical approaches employed in different home education contexts (English, 2012), I needed to develop rigorous understandings of the ways that participants were facilitating and delivering arts education for their children. This would form a

foundation for the development of adaptable arts resources for the website. Each iteration of the design process yielded important insights into participants' arts teaching and learning processes, and contributed to continual development and refinement of a model that summarised the major processes in home educators' approaches to creative arts learning (see Figure 16 in Chapter 7), and upon which the GAAC was based. Interviewees identified with this model closely. Natalie noted that the processes outlined in this model were reflective of processes that occurred so naturally that she often was not consciously aware that she was enacting each of the steps in the model. She stated, "I do all of these things, without identifying that I'm doing it..." and when asked how reflective the model was of her arts teaching and learning practice, Jean stated, "Absolutely. Totally." This was the foundation for the Guide to the Arts across the Curriculum (GAAC), which scaffolded adaptable arts learning guidance across the website. Its inclusion in the website at the start of the Gamma cycle was appreciated as a significant and positive refinement by four out of the five Gamma cycle interviewees. More importantly, participants identified it as an adaptable and useful model for scaffolding and enhancing future arts learning to ensure its authenticity. Grace stated,

I like [the GAAC], because it's really going through all the processes. ... It's really changed the way that I approach and structure the arts ... Rather than just being a painting, if you're doing "painting", it's that whole process; that thinking about something before you do it, [then] doing it, and then having a look at the end and analysing it, reflecting and then working out what can I do better. (Grace)

Only Natalie preferred the earlier IAF, owing to her strong desire for structure and "step-by-step instructions"; however she identified that the Arts Planning Template, which was developed to accompany the GAAC, would satisfy her desire for overt structure and help with planning and the delivery of authentic arts learning. As such, it was recognised that the provision of a range of resources and varying levels of scaffolding was vital to ensuring the website met varying participant needs and represented adaptable resources for individual contexts. These varying levels of scaffolding included illustrative examples of arts learning in action, flexible suggestions for arts activities and projects, suggestions for integration with other

subjects, and then broader arts planning guidance via the GAAC, Arts Planning Template and guide to the Australian Curriculum. Each interviewee’s response to their favoured aspects of the website highlighted that different elements were favoured, but the overwhelming sentiment was that there was useful guidance and resources that met individual needs. Jean stated, “I found that what was on the website was able to just fit in with what [my son’s] interests were, because there is so much on there. It would be almost impossible not to find something that’s going to fit.”

Based upon these findings, the following relationships were identified between the development of adaptable arts learning resources that are reflective of the processes used by home educators and the draft design principles (Table 20).

Table 20 Relationships between adaptable arts learning resources and draft design principles

Draft Design Principles	Adaptable arts learning resources that are reflective of the processes used by home educators
<p><i>1: Situate learning tasks in the family’s CoP;</i></p> <p><i>Draft design principle 2: Integrate arts learning in open-ended projects</i></p>	<p>Varying levels of scaffolding enable parents/carers to feel supported to the level they require and flexible guidelines and supporting resources enable parents/carers to tailor learning to their context, which includes their educational approach, and children’s needs and interests.</p>

8.2.1.5 Comprehensiveness

The final characteristic of the arts learning resources that the participating home educators identified was “comprehensiveness”. Whilst participants valued the directional nature of resources in homeiswheretheartis.com.au for the way they “narrowed the field” and helped to reduce a feeling of being overwhelmed by the immensity of possible approaches to arts learning, they equally appreciated the comprehensiveness of the resources they could access within the site. Feedback included the following:

I think it's quite good, because you do have "this is what the curriculum requires" and "this is how you can go about it" and "these are some suggestions... this is what other people have done" and then you've also got links to other professional websites ... A lot of things really. Techniques and skills and terminology ... Yeah I think that's a holistic approach helping the child to have that overall understanding of not only what they need to do, but why they're doing it, how they do it, how they can expand on it. (Twilight)

There is so much stuff there. I'm not sure there's anything lacking. (Eve)

I really think the website is adequate and that it does have enough there to follow and utilise. (Grace)

[For] everything I did end up going into and researching, there was something there that I was able to use or that linked me out to somewhere else. It took me on a path to something that worked. (Jean)

Uploads to the Project Gallery through the Gamma cycle indicated that participants were also consistently using resources from the website in the arts learning projects they were contributing to the website. Whilst only three out of the ten participant uploads to the Project Gallery in the Alpha made use of the website resources in developing and undertaking their Alpha cycle arts learning projects, all uploads during the Gamma cycle showed evidence of using the website resources (see Table 21). This growth in the use and application of the website's arts learning resources was a favourable indication that participants were finding sufficient ideas, inspiration, information and support in the website.

Table 21 Gamma cycle Project Gallery uploads

Project title	Arts subject/s covered	Description	Evidence of website resources
Lino Carving Christmas Cards	Visual Art	Using lino printing to create Christmas cards	Arts planning template <i>Project of the month</i> Lino printing resources Online meet up

Mixed Media Christmas Artwork	Visual Art	Using mixed media to create a Christmas Artwork	<i>Project of the month</i> Arts planning template Painting tutorials
Screen printing	Visual Art	Creating an artwork using a four coloured screen printing process	<i>Project of the month</i> Screen printing resources
Antarctica soundscape and graphic score	Music	Integrating Geography with music to create a graphic score and soundscape of the Antarctic landscape	<i>Project of the month</i> Online meet up Graphic score resources

Based upon these findings, the following relationships were identified between the comprehensive provision of arts learning resources and the draft design principles (Table 22).

Table 22 Relationships between comprehensive arts learning resources and draft design principles

Draft Design Principle	Comprehensive provision of arts learning resources
4: Determine specific learning tools required for the task and provide formal instruction regarding these “tools” of the arts	Having a sufficient variety and number of support resources for arts learning helped parents/carers to find relevant support for arts learning according to their context. In particular, resources that focussed on the development of arts knowledge and skills were helpful to parents/carers in determining how to enrich their children’s arts literacies.

8.2.1.6 Arts learning resources summary

Gamma cycle analysis demonstrated that participants were satisfied with the arts learning resources within homeiswheretheartis.com.au. These resources specifically included the:

- Guide to the Arts across the Curriculum (GAAC);
- Arts Learning Template;

- Guide to the Australian Curriculum;
- Project Gallery;
- Suggestions for integration;
- Tutorial videos; and
- Web links to supporting resources on other websites.

Most significantly, participants appreciated the organisation of these resources and the way they were interlinked throughout the site.

In seeking to understand the aspects of homeiswheretheartis.com.au that participants found effective for supporting their arts learning, a number of characteristics of arts learning resources were identified. Importantly, by examining these resource characteristics with the existing draft design principles, I was able to identify relationships between the features of the resource, why these were effective, and how these aligned with various draft design principles. Analysis revealed that further refinement of arts learning resources was not necessary. This did not mean that the website would remain static thereafter; if additional resources were found by myself or website members to be beneficial to supporting the existing approach and structure in homeiswheretheartis.com.au, then the website would incorporate such resources.

I now turn to a discussion of findings regarding the website's community features.

8.2.2 Community

Arts learning resources could be accessed asynchronously and independently by participants. However, they were primarily designed to be used as an integral element of an online CoP whereby participants could access useful resources and engage with others in ways to build upon these; adapt them to their individual contexts; support each other in developing their skills and confidence in arts teaching and learning; and contribute their own arts experiences to the betterment of the entire community.

Specific aspects of the website that were designed to facilitate this engagement with the resources and the online CoP were the Forum, closed Facebook group, Project

Gallery, and Online-meetups. Data from these community elements of the website, in addition to survey and interview data, provided helpful insights into participant engagement with the online CoP.

As previously outlined, the frequency and intensity of participant engagement with the community elements of the Gamma cycle website was less than the Beta cycle interaction. However the shorter timeframe of the Gamma cycle and the time of year during which it had been run were both taken into account, helping to explain this lower participant engagement. When the number of Forum posts and Project Gallery uploads were averaged over the number of days in the respective iterations, the number of forum posts was similar, however a 50% reduction in Project Gallery uploads was noted (see Table 23). Most interview participants explained that their engagement with the site had slowed during the latter months based upon external factors, rather than dissatisfaction with the website.

Table 23 Average Forum and Project Gallery interaction per day (Beta and Gamma)

	Beta cycle	Gamma cycle
Length in days	108	72
Average forum posts per day	0.64	0.5
Average Project Gallery uploads per day	0.1	0.05

In spite of the lower level of visible interaction with the online CoP during the Gamma cycle, interview data aligned with, and supported findings from, the previous two iterations: participants appreciated the nature of the online CoP, even though a number of them rarely contributed to this. In particular, favourable feedback regarding the collaborative features of the online CoP related to the value of mentoring relationships, which were perceived as occurring on two levels:

- mentoring from an Arts educator; and
- peer mentoring between community members.

In addition to insights regarding the ways these forms of mentoring supported home educators in the delivery of Arts learning in their individual contexts, participant

feedback also provided insights into reasons why more extensive participation may not have occurred for the majority of community members. I now turn to an exploration of these findings.

8.2.2.1 Mentoring from an Arts educator

My aim for the online community was that mentoring would occur between more experienced members of the community with regard to Arts learning and less-experienced home educating members. It was never my intention to be viewed as an “authority” or “the arts expert”; instead, I had hoped to be an equal member of a diversely-skilled community. However, this position of authority was difficult to avoid; my role as the researcher, website developer and facilitator, and ‘experienced Arts educator’ visibly positioned me as an authority in the project. Nevertheless, interview feedback highlighted that participants valued the specialised knowledge and understanding I possessed, and that their interactions with me via various aspects of the website and research process yielded greater understanding of how to use or enhance the Arts in their home education practice. Most notable was participant feedback regarding the opportunities that were given to interact with an Arts educator regarding their arts practice. The Online Meetups were one such platform. Grace said,

The [online meet ups] have been really helpful for me because you focussed on the different [art subjects], what they are... and how you could approach them and that sort of thing... We could ask the questions and you helped me to see the validity of involving [my children] ... So, it’s really made me restructure how I do a lot of the teaching – not just Arts but when it is incorporated with other subjects as well... You’ve really helped me to appreciate the Arts and how valuable they are. (Grace)

A new participant who joined the research in the Gamma cycle attended her first online meet-up shortly after joining and noted that she had a greater appreciation for ways to enrich her children’s arts engagements in a manner that still aligned with the family’s unschooling approach to learning. She wrote in an unsolicited email: “Just a quick note to say thanks for your webinar on Friday. I am looking at our spontaneous arts outbreaks with a more scholarly eye! This will be very helpful when doing our planned unschooling” (personal communication, October 19, 2015). Natalie noted in her final

interview that the mentoring that occurred during the meet-ups was a more effective way for her to understand concepts than trying to process information on her own: “Having you actually talk about it and explaining things is more valuable to me than actually me sitting there and trying to work it out.” Similar feedback was received from all interview participants, highlighting the benefits of interaction between community members and those with greater expertise to facilitate beneficial growth in learning. The opportunity to ask me arts-related questions, clarify understandings and discuss targeted issues that related to their immediate practice was clearly valued, and helped to build a sense of confidence in the participants’ Arts teaching and learning. Even the interviews were identified by two participants as being a valuable element of their learning process. Natalie referred to the interviews as her favourite aspect of being a research participant. Jean reiterated:

Talking to you in these interviews has been the thing that’s really made me go “I do need to do that”. And then I have actually sat down and really trawled through the website and gone “yep okay”. I’ve made notes of things to come back to which we did. (Natalie)

The opportunity to share my Arts knowledge and experience with participants via interpersonal interactions was notably appreciated and visibly contributed to some participants’ perceptions of an enhanced approach to arts teaching and learning. Even though I had initially somewhat resisted being positioned as an “arts expert”, I reflected on the value of this role in supporting participants. Research conducted by Alter, Hays, and O’Hara (2009b) highlights that many generalist classroom teachers feel that the knowledge and experience required to effectively teach the creative arts are beyond their skills. My interactions with home educators had highlighted that many shared this sentiment, feeling ill-equipped to teach into the arts subjects when they possessed no background experience. A number of arts researchers have made strong recommendations to enhance arts education through the provision of further levels of in-service teacher support in order to equip generalist teachers with content knowledge and skills in each of the arts disciplines (Alter et al., 2009b; Russell-Bowie, 2011; Seidel et al., 2009). I similarly recognised the potential for my role as a mentor to offer support to home educators, and to do so in a non-confrontational, relational manner that complements the philosophy of home educators.

8.2.2.2 Peer mentoring between community members

My intention for homeiswheretheartis.com.au was to establish a community committed to knowledge sharing that valued the contributions of *all* members, that gave a platform for those with greater expertise to share their arts knowledge, and for those with less experience to develop greater expertise through the process of engagement with the community. Whilst community members appeared to have benefited from the mentoring I had facilitated, I saw less evidence to demonstrate mutual mentoring between community members. Although participants identified that the community interactions via the website's collaborative features were always positive and affirming, these tended to represent social interactions, rather than the deepening of Arts learning through meaningful interaction.

Nevertheless, participant feedback on the benefits they had gained from collaborations with other members demonstrated that a form of mentoring was still at work, even if it had not represented the kind of mentoring I had anticipated. Frequent comments were made about the benefits gained from seeing how other home educators had approached arts learning in the Project Gallery. Grace felt her own arts teaching benefited from simply viewing the approaches taken by other families:

... everyone does it differently, and [the website community] gives you a bit of a look at how other people do it or even how they think about something. That's just a way that you can go, "Oh! I wouldn't have thought that. I didn't think that way!" and that can help you come up with a better approach or cover something that you've skipped or didn't realise you could do. (Grace)

Others similarly appreciated the way that the collaborative approach taken in homeiswheretheartis.com.au enabled them to see what other families were doing in the arts, noting that this helped to build confidence. Natalie stated, "It's just seeing what other people are doing, and knowing that [my daughter is] already doing that. I just feel it acknowledged it or encouraged it." Such comments demonstrated that participants valued the ability share their learning and to see the learning of other home educators. I was unclear whether such sharing could be considered a form of mentoring. When I queried Eve about this, her response was positive:

I would certainly consider sharing ideas that could inspire other home schoolers a form of mentoring, even if the initial intention was not to mentor, only to share. Your Project Gallery is a platform for mentoring, even if it is in a passive way. Let's call it 'passive mentoring' ... If you look at it that way, all the Pinterest boards on home education do the same, and the blogs and Facebook pages and any other social media. (Eve)

As such, the Project Gallery was appreciated as a valuable element of the CoP in homeiswheretheartis.com.au that facilitated a form of mentoring, allowing participants to be inspired by, and learn from, the experience of others.

Participant use of the Forum reflected the important nature of the online CoP as a means to share with other home educators regarding Arts learning. As with the Beta cycle forum use, the bulk of posts were regarding Project Gallery uploads (see Table 24), thus focussing most participant Forum interaction on the sharing of their arts projects and commenting or asking questions of the arts learning of other families. I felt, however, that there was scope for more mentoring through questions and responses, and arts-based discussions in the Forum, and therefore sought to understand factors that may have limited such interactions and the formation of deeper mentoring relationships.

Table 24 Gamma cycle Forum use

Post Type	No. of forum posts
Researcher-initiated conversation	6
Participant responses to researcher posts	4
A participant starting a thread to ask a question	0
Forum post sharing Project Gallery uploads	14
Participant comment or question regarding a Project Gallery upload	12
Total posts	36

A correlation was found between participants who engaged more thoroughly with the website and the perceived benefits they gained from it (Wenger et al., 2002). Survey data highlighted that those respondents who had accessed the site most regularly were

the same respondents who indicated that they found the website “very useful”. Similarly, interview participants who engaged more with the collaborative features of the website expressed the most transformation in their approach to, and confidence in, Arts learning. Grace, who attended each online meet-up, contributed a project for each *Project of the Month* and regularly posted in the Forum was overtly positive about her role as a participant, and disappointed that the online community had not grown as much as hoped:

I’m really positive about [the website]. It’s been great, and all the changes that you’ve made have added to it... I found it really good and it’s just a shame that more people didn’t engage with it, so that the community part didn’t grow. But there’s only so much you can do and I don’t know how to suggest to get more engagement. (Grace)

Grace’s thoughts were similar to other interview participants, who all likewise commented that they could not see what more could be done to enhance the engagement of community members.

Cambridge, Kaplin, and Suter (2005) state that frequent interaction between community members is an important element of keeping engaged with the community. Lave and Wenger (1991) highlight that the development of relationships is central to the health of a CoP, and that this needs time to mature: “A community of practice involves ... much more than the technical knowledge or skill associated with undertaking some task. Members are involved in a set of relationships over time” (p. 98). Given that participants had continued to join the project over the course of the year, and that some had only just joined towards the end of the project, I began to appreciate that the time that the CoP had been operating was not long enough to develop and grow “a set of relationships” (Lave & Wenger, 1991, p. 98). Given that the website was only just at a point where participants were expressing satisfaction with all aspects of its functionality, I appreciated that more time was needed to now build trust and relationships and develop the online CoP.

Positively, sufficient data was available to show that, whilst visible participant engagement in the collaborative features of the website had been less active than hoped, the online community was beneficial to participants who made use of it, and

had the potential to benefit other members who may interact via legitimate peripheral participation, includes viewing the interactions and Project Gallery uploads of more active members. Such findings suggested that the ongoing application of principles to support engagement in the online CoP may well grow what had begun to develop.

8.2.2.3 Factors that impacted negatively on mentoring

As previously stated, when developing the online CoP, it was never my intention to establish myself as an arts “authority” within the research project and website. This created an ongoing tension regarding my role as both an insider and outsider (Fetterman, 2005; Hawkins, 2011). Whilst participants expressed the benefits of interactions with me as an Arts educator to their own arts teaching practice, certain limitations were also evident when participants viewed me as an “authority” within the website and online CoP. The binary between the researcher and researched subjects, which often sees the researcher privileged and ascribed a more powerful status, is a challenge many researchers work to overcome (Midgley, Tyler, Danaher, & Mander, 2011), myself included. Based upon the recommendations of Hawkins (2011), I had intentionally instituted a number of strategies in order to transcend such binaries as possible throughout the research process, including a strong focus on collaborative decision-making within a climate of mutual respect, warmth and trust. However, even with such measures in place, participant interactions indicated that they perceived me as an authority figure. Data analysis highlighted that whilst participants benefitted from my role as a mentor, this equally may have limited sharing between participants due to a diminished sense of “co-ownership” of the website. Further, reflections on the sense of mistrust that some home educators hold towards institutional authority (Barratt-Peacock, 1997; English, 2015a; Liberto, 2015), raised concerns as to whether my visible position as an authority may have hindered more open sharing among community members, who mistrusted whether their contributions would be safe from scrutiny.

By way of example, the Project Gallery had been designed as a collaborative feature that supported open knowledge-sharing, collaborative learning, and participant autonomy through the opportunity to make contributions directly to the website, effectively bypassing my “authority”. However, on two occasions, participants emailed prior to uploading their project to seek my approval or validation for its

content. This suggested to me that they did not view the space as their own, and did not trust that their work was “good enough”. Similarly, despite my intentional references to the online space as “our website” and “our community”, I noted that all interview participants referred to homeiswheretheheartis.com.au as “your website”, indicating that they viewed the site as belonging to me, rather than all community members. Such references could certainly arise from a respectful acknowledgement that I was responsible for the development and presentation of the site, nevertheless I had hoped for a stronger sense of co-ownership.

Cambridge et al. (2005) state,

Organizations can sponsor CoPs, and through a series of steps, individuals can design a community environment, foster the formalization of the community, and plan activities to help grow and sustain the community. But ultimately, the members of the community will define and sustain it over time. (p.1)

This suggested that, for the community to develop and nurture more effective peer mentoring, my visible authority within the community needed to be minimised, effectively allowing the members of the community to define and sustain it, rather than my own goals as a researcher.

As previously discussed, Lave and Wenger (1991) emphasise the development of relationships between members as an important feature of healthy CoPs. Data highlighted that interactions between participants had been supportive and positive throughout all iterations, but not enough to stimulate a strong sense of community, or to facilitate deeper peer-mentoring relationships. Grace indicated that she had hoped for greater peer interaction, and that participant insecurity may be one reason for low-interaction:

I feel like the interaction that’s happened between members has been positive [but] there probably hasn’t been a lot of it... It’s a tricky one because it depends on why they are not participating. I know at times I think, “Is that good enough to put up?” And you worry about that criticism or someone saying, “That’s not good enough”, or, “That’s not at such-and-such a level”. So I guess that’s the hard part. (Grace)

Jean and Eve similarly felt that confidence was integral to participation, and that the small number of active participants was a contributing factor to lower visible engagement and sharing of personal experience:

I think maybe because there's not a lot of people on using it all at once... You know, when there is lots of activity and things happening, things snowball and build on themselves like what you see on some of the really busy Facebook forums and Facebook groups: they're getting lots of posts every day and a lot of the time ... [Whereas with homeiswheretheartis.com.au] I feel like it's got to be: "I'm making an announcement: I have something to show". So I feel like it almost feels like walking into a big room with only a few people. You know, you don't say something unless you're feeling really confident. Whereas, when there is lots of just buzz and chatting, you kind of feel like you can come out with anything and it doesn't matter if it's insignificant or not important or silly because it's going to get a little bit lost in the noise anyway. It feels a bit safer. (Jean)

Perhaps the main reason is ego, and the fear of it being bruised. You know how it feels to post something and get little or no response. Sure heaps of people read posts and don't reply. Then for someone to write about something they think is really cool and is working really well for them - and get no one respond... that could be what holds most people back. Yep, including me! (Eve)

This feedback highlighted that, beyond a lack of co-ownership of the learning platform, open sharing of learning experiences was further inhibited by a lack of confidence, and that a low level of participant interaction then required greater confidence to interact. As such, I recognised a significant element underpinning open and useful sharing amongst participants: *activity generates activity (and potentially generates confidence)*.

Other interviewees gave similar feedback, alongside their thoughts on reasons they felt that people were less likely to readily share in the forum within homeiswheretheartis.com.au. Most notably, there was consistent agreement that the website was less readily-available than other social platforms with which they were

already engaged, owing to the need to enter a password each time it was accessed. Additionally, the Forum represented, “yet another” platform with which to engage. Eve noted the significance of ready access in promoting engagement, and that homeiswheretheartis.com.au might come last in a list of social platforms already used:

...you have to sign into the website ...so whether some people will think, “I should check that”, but they are already on Facebook and they are already looking at Pinterest, and that would be one less thing that would encourage people to share. (Eve)

Lee, Son, and Kim (2016) assert that information overload and social network fatigue are increasingly recognised as stress factors which can lead to physical and psychological strain, which could account for participant reticence to engage more fully with the additional networking platform that they felt homeiswheretheartis.com.au represented. Compared to other online communities that focus on all aspects of home education, thus providing home educators with a single platform that can potentially cater for all their schooling-related needs, homeiswheretheartis.com.au represented a narrow focus – the Arts - and was therefore less likely to receive regular traffic. During interviews, a number of participants suggested tapping into existing online home education communities rather than trying to establish a new online community:

[Aussiehome schooler.com.au] is probably a good site to tap into. It’s a good community because they’re quite active (almost 5,500 members) ... You’re adding to the community as well and that’s what the forums are for: the community support and ideas. (Eve)

In particular, participants mentioned the ready accessibility and lively interaction within Facebook:

I think you could possibly put more resources into moderating and running a Facebook group. People love Facebook groups, especially home schoolers... I’m a member of a lot of different Facebook home school groups, and it’s great to see what people post links to. They tell you things that are on. There are so

many activities that are on that I would not have known about if it wasn't for those groups. (Jean)

At the end of the Beta cycle, the final strategy I had developed to enhance social interaction was to make greater use of the Facebook closed group to advertise new project uploads and stimulate ongoing interest in the website and the interaction therein. Interestingly, by utilising Facebook more extensively, I noted an increase in participant response on this platform, with a mirroring decrease in the forum interaction on homeiswheretheartis.com.au. Participant feedback supported the notion that, as a more accessible platform with which they were engaged for numerous reasons, Facebook was preferable. This was supported by survey data, where questions pertaining to a preferred platform indicated that an existing social platform was preferable for the majority of participants, with only three respondents indicating that changing to an existing social platform would make them less likely to share arts projects and thoughts, as compared to 14 who said they would be more likely, or no more or less likely.

Engaging with participant feedback on the benefits and limitations of the developing community in homeiswheretheartis.com.au highlighted a number of important features that provided insight into the development of an online CoP for home educators with respect to arts learning. Importantly, I found that participants:

- wanted to experience the benefits of being part of an online community with regard to their arts learning as part of their wider home educating practice;
- were more likely to share their experience when feeling confident, which was promoted by a sense of joint ownership in the community and active sharing from other community members; and
- were already engaged in existing online communities that were more readily accessible and focussed on many facets of home educating.

Such insights were important in determining how to grow and support the online CoP related to homeiswheretheartis.com.au.

Insights for website refinement:

- allow website members to remain signed into the website;
- consider how existing social networking platforms might be utilised; and
- consider strategies to facilitate the website that maximises opportunities for mentoring home educators using my experience as an arts educator in order to facilitate a sense of co-ownership for all members in the online CoP.

8.2.2.4 Community summary

Gamma cycle analysis confirmed that families appreciated the online community features of homeiswheretheartis.com.au, even when participation in these interactive aspects was low. Participants had expressed that they benefitted from my mentoring as an arts educator, but this had equally presented challenges by working against a sense of co-ownership of the online community and learning space for participants. Participants also benefitted from low level peer mentoring through sharing ideas and knowledge in the Project Gallery and Forum/Facebook group. Whilst these interactions had not served to develop a set of relationships over time (Lave & Wenger, 1991), sufficient evidence existed to show they had developed to some extent and that – with adequate time and nurturing – relationships may yet develop further. Finally, insights into aspects of the website and facilitation that could be improved in order to help nurture the online community were also identified. These included strategies such as reconsideration of the choice of online platform and nature of facilitation.

Based upon these findings, the following relationships were identified between the CoP in homeiswheretheartis.com.au and the draft design principles (Table 25).

Table 25 Relationships between community features and draft design principles

Draft Design Principle	Community of practice in homeiswheretheartis.com.au
6: Provide support for parental knowledge and understanding through meaningful collaboration in an online Community of Practice	This design principle was found to be relevant. However, analysis of data also indicated the need for more specific design guidelines to enable this support to be tailored to the specific needs of home educators and to reflect the understandings developed throughout this project. This will be explored in Phase Four: “Reflection to produce design principles”.

8.3 Summary of Gamma cycle research findings

As the final iteration of homeiswheretheartis.com.au in the research and development process, the Gamma cycle helped to consolidate understandings developed in the previous phases of the research. I developed concluding insights into the beneficial features of an online learning environment for arts learning in home education and how these may contribute to the refinement of the project's design principles in Phase Four. I identified that participants were satisfied with the changes made to the learning environment, and that they found both the arts learning resources and the community features of homeiswheretheartis.com.au beneficial to their facilitation of arts learning.

Whilst responses regarding the developing online CoP were generally favourable, participant interaction showed scope for further development, and strategies for continued development of the CoP beyond the iterative research process were developed. Importantly, relationships between the project's draft design principles and Gamma cycle findings were identified, which, in combination with reflections upon findings throughout all three iterations, would further contribute to producing the final design principles for this project.

8.4 Proposal and implementation of changes to the learning environment at the conclusion of the Gamma cycle

Peterson (2009) states that "online communities created for research purposes should be designed with sustainability in mind". An important personal goal when I entered into this research project was the development of an online arts learning space that would continue beyond the life of the research project. As such, whilst the Gamma cycle represented the last formal iteration of homeiswheretheartis.com.au for the purposes of data collection and analysis, implications which arose from the Gamma cycle data analysis contributed to a series of changes to the website. In a similar process to that outlined in the Alpha cycle, the existing website and proposed changes were evaluated according to their viability, legitimacy and efficiency (McKenney et al., 2006) prior to implementation. The following changes were then implemented:

- Close the website features hosted on a separate server;
- Redevelop the Project Gallery within the existing Wix site;
- Replace the log in process with a streamlined sign-up process that allows members to remain logged in to the website; and
- Move forum discussions and community engagement to existing, active online social platforms.

An overview of each amendment is now detailed.

8.4.1 Close the website features hosted on a separate server

Chapter 5 outlines my rationale for hosting homeiswheretheartis.com.au across two servers. I had employed the services of a local website designer to develop a sister site which hosted the Project Gallery, forums and informed consent process, all of which required specialist coding skills I did not possess and capabilities not offered by the Wix website builder. This had proved a *viable* and *legitimate* solution (McKenney et al., 2006) throughout the research process, but a number of factors helped to identify that this was not *efficient* on a long-term basis (McKenney et al., 2006). First, running the website across two servers more than doubled website running costs. Moreover, insights gained from participant feedback indicated that alternative approaches to facilitating the functions performed by the sister site were possible and preferred, including the option to stay logged in to the website, and make use of existing social networks to facilitate engagement with the community as part of their wider engagement with other home educators. The way that these strategies were enacted is outlined in the sections below.

8.4.2 Redevelop the Project Gallery within the existing Wix site

The Project Gallery was the most difficult feature of the website to re-develop and ultimately required a compromise when considering its viability, legitimacy and efficiency (McKenney et al., 2006). No features offered within the Wix website builder would permit users to independently upload videos, images and PDF documents to the website. Whilst the closed Facebook group offered such features,

there was no way on this platform to provide users with a gallery format or search function. Finally, I decided upon a Project Gallery within the existing Wix website whereby participants could email their project to me, which I would then upload to the Project Gallery on their behalf. This process was not ideal as it reinforced the very binary between website user and myself as the facilitator that I had hoped to avoid. However, when alternatives were considered, this solution presented as the most viable and efficient, whilst maintaining the sister site was not. This solution was cost-effective: a sister site was no longer required to host the Project Gallery, and changes were now easily made without the associated costs I had formerly incurred for each update to the Project Gallery. Further, emailing a project actually streamlined the submission process for participants: the uploading process in the Project Gallery did require a number of steps, as compared to the single step of emailing and attaching relevant documents. Finally, this step gave me much greater creative control in the layout and design of the Project Gallery. Figure 26 shows the design difference between the Project Gallery on the sister site as compared to the final version on the Wix site. The new Project Gallery was not only more visually consistent with the rest of the site, it also provided a brief description about each project that informed users of the contents of each project without the need to open each project for such information.



Figure 26 Design features of the new Project Gallery compared to previous version

8.4.3 Replace the login process with a streamlined sign-up process that allows members to remain logged in to the website

Following the Gamma cycle, data would no longer be collected through homeiswheretheartis.com.au. As such, the informed consent and sign up processes were no longer required to access homeiswheretheartis.com.au and could be eliminated. However, given that the website would continue to invite participant contributions to the Project Gallery and closed Facebook group, signing up for website membership – which required participants to agree to standards of ethical online behaviour – was still required. Given the very clear feedback about the utility of remaining logged in, and its significance in promoting more regular participant engagement with the website, I replaced the existing sign-in process run through the sister server with a Wix function that permitted all members to remain logged in.

Importantly, this change meant that website members would also no longer have the ongoing reminder on the sign-in page that the website was part of a research project. This small, but important aspect was appreciated as a potential first step in helping to reduce the binary between members and myself as the website facilitator.

8.4.4 Move forum discussions and community engagement to existing, active online social platforms

Gamma cycle data analysis had highlighted that the accessibility of the online platform and extent of relevance of the platform to warrant engagement were important elements that could attract or prevent home educators from engaging in homeiswheretheartis.com.au. Moreover, participant confidence was an important feature that underpinned the extent of participant engagement and contributions to the community, and the level of existing activity in the platform could encourage or stifle further engagement. Based upon participant recommendations and the level of engagement with existing social platforms, I made the decision to move all community interactions to two existing social networks: the [homeiswheretheartis](http://homeiswheretheartis.com.au) closed Facebook group and Aussiehomeeducator.com.au. This decision represented a viable, legitimate and efficient use of existing networks, whilst still permitting the kind of interaction and mutual support required to facilitate community engagement with the resources provided in homeiswheretheartis.com.au. Participants could access these platforms for

a variety of personal, home educating and social requirements that therefore minimised “social network fatigue” (Lee et al., 2016), and it was hoped that the active discussion that already occurred within these two platforms would help to develop member confidence in sharing regarding their arts learning. Importantly, I felt that moving discussions to an existing social platform was an important step that would reduce the binary between myself and website members; it was effectively “neutral territory” on a platform with which members were familiar and engaged for a number of reasons. As such, I felt this decision helped to maximise opportunities for mentoring home educators using my experience as an arts educator and encouraging a sense of co-ownership for all members in the online CoP.

8.5 Chapter summary

This chapter has detailed the findings from the final iteration of the Phase Three: Effectiveness Evaluation of homeiswheretheartis.com.au which occurred from late September to December 2015. The inductive approach taken to data analysis revealed important understandings regarding beneficial features of the evolving website, and how participants’ arts teaching and learning were likewise evolving in response to their engagement in this research project. It similarly revealed aspects of the online CoP that were beneficial, and areas where further amendments may yield enhanced engagement. Collectively, the analysis from this phase provided helpful insights to begin the evaluation of the project’s draft design principles, in preparation for the final phase of the project: reflection to produce design principles. Following the Gamma cycle analysis, the final round of updates in response to data analysis were implemented, and homeiswheretheartis.com.au was released to the home educating public.

CHAPTER 9

Conclusion – Reflection to produce design principles



In this chapter, I explore the final phase of the Design-Based Research process and present the project’s conclusions. During this phase, the predominant research goal of generating a solution to an experienced problem is finalised. Additionally, evidence-based heuristics that can inform future research and development are generated. These all-important design principles contain “substantive and procedural knowledge with comprehensive and accurate portrayal of the procedures, results and context, such that readers may determine which insights may be relevant to their own specific settings” (Herrington et al., 2007, p. 8). I begin with an overview of the research process through which the design principles were developed, followed by the presentation of the final design principles and arising implications from the project findings. I then explore the project’s research questions, demonstrating how these have been addressed throughout the project. The chapter concludes with a brief discussion of limitations and recommendations for future research.

9.1 Overview of the research project

This research began with personal experience: as both a home educating parent and a tertiary Arts educator to pre-service teachers, I found the facilitation of Arts learning in my home education context to be extremely challenging. My Masters research into whether this experience was shared by other home educators confirmed that the Arts were often considered a complex learning domain, and that support resources specific to home educators were lacking. This doctoral study therefore sought to identify the needs of home educators with regard to arts education, and to generate and refine appropriate and targeted support.

Design-Based Research (DBR), with its emphasis on both practical and theoretical research outputs, was chosen as a cogent research approach for the aims of this study. DBR permitted me to develop an empirically-grounded solution to an identified problem (Wang & Hannafin, 2005) in a manner that invited and honoured the experience of the community I was researching, ensuring that the research was representative of, and beneficial to, home educators themselves. In addition to these practical outputs, DBR permitted the development of important theoretical insights into home education, generating valuable research contributions to the (slowly) growing body of research into Australian home education.

The project was structured according to the four phases of DBR developed by Reeves (2006), with an emphasis on grounding each new phase in the developing analysis. An overview of the four phases and how these have been explored in this thesis is shown in Table 26.

Table 26 Overview of the four phases of research as explored in this thesis

Phase of Research	Explored in
Phase One Analysis of practical problems by researcher and practitioners in collaboration	Chapter 1 Background to the research Appendix A
Phase Two Development of solutions informed by existing design principles and technological innovations	Chapter 4 Development of the draft design principles Chapter 5 Development of the prototype design solution
Phase Three Iterative cycles of testing and refinement of solutions in practice	Chapter 6 Effectiveness evaluation (Alpha) Chapter 7 Effectiveness evaluation (Beta) Chapter 8 Effectiveness evaluation (Gamma)
Phase Four Reflection to produce design principles and enhance solution implementation	Chapter 9 Conclusion

During Phase One, I worked collaboratively with participants, to elicit their perspectives on the challenges they faced regarding the delivery of Arts education, and of the strengths they possessed that could be harnessed and maximised in the development of a support resource. An online learning environment which could be accessed synchronously and asynchronously by participants regardless of location was chosen as an ideal and equitable means of delivery, permitting home educators from all over Australia to participate.

In Phase Two, I engaged with relevant research and theory in home education, arts education and online learning to inform the development of draft design principles which then guided the creation of a prototype support resource that addressed the Phase One findings. A website, aptly titled homeiswheretheartis.com.au was developed, which focussed on the provision of flexible arts learning resources that could be adapted according to individual contexts, within an online Community of Practice (CoP) that would provide mutual support for home educators in the facilitation of the provided arts resources. A prototype version of homeiswheretheartis.com.au was then refined in response to feedback from experts in home education, arts education and online learning before being released to home educating participants.

Phase Three represented the important iterative trial and refinement of homeiswheretheartis.com.au, whereby participants engaged with the website in three successive sub-phases: Alpha, Beta and Gamma. Data arising through each sub-phase were collected and analysed to inform successive iterations of homeiswheretheartis.com.au. This process of working collaboratively with home educating practitioners aimed to ensure that the website progressively met their specific needs in facilitating an Arts education with their children.

Phase Four findings, the focus of this chapter, represent the culmination of the research process whereby the predominant research goal of generating a solution to an experienced problem is finalised, and evidence-based heuristics that can inform future research and development are generated. During this phase, six design principles were developed, which may be used as guidelines for learning designers in order to develop an online arts learning environment for home educators. Importantly, these design

principles may be transferable to related contexts, as will be discussed later in the chapter. The culminating design principles are now explored in detail.

9.2 Findings

The appeal of DBR for educational researchers, and the predominant reason it was adopted for this doctoral research project, was its focus on bridging the theory-practice divide (Barab & Squire, 2004; Reeves et al., 2011). The outcomes of the design process represent both practical and theoretical outputs that help to balance local effectiveness with theory development (Sandoval & Bell, 2004). I now turn to the findings of this project, and summarise them according to the research outputs in terms of theoretical and practical contributions.

9.2.1 Design principles – Theoretical research outputs

DBR is “conducted to develop theories, not merely to empirically tune ‘what works’” (Cobb et al., 2003, p. 9). The design platform thus represents a context through which theory may be advanced (Barab & Squire, 2004). The major theoretical output resulting from the iterative design, testing and refinement of homeiswheretheartis.com.au is a set of design principles for the design of online arts learning environments for home educators. In addition to these final design principles, the project has permitted the identification of specific insights into how participating Australian home educators teach and engage in the Arts. This has resulted in the development of a model to explore the major processes of Arts learning in home education, as revealed in Figure 16, Chapter 7.

The project’s draft design principles were developed by synthesising existing research, design guidelines and heuristics across home education, arts learning and online learning, which represents important foundations for the development of the prototype learning design. Applying these design principles in an online environment and then iteratively evaluating this environment in collaboration with home educating participants led to a refinement of the draft design principles. The original six principles (see Table 4, Chapter 4) have been revised to more accurately align with the educational approach of home educating participants, their experience with the learning materials in homeiswheretheartis.com.au, and their engagement with the

technological platform, as revealed through the iterative research process. The final six design principles for designing an online arts-learning environment for home educators are presented in Table 27 and explored in detail in the following section.

Table 27 The six design principles for an online arts learning environment for Australian home educators

1. Learner at the centre	Learner needs and interests as intimately understood by the parent/carer should drive the direction of learning tasks.
2. Authentic tasks	Facilitate situated, open-ended, learning tasks that represent real life situations or challenges in the learner’s context, in addition to providing opportunities to integrate the Arts with other learning domains.
3. Authentic arts learning	Promote effective strategies and support materials to assist parents/carers in developing arts learning that engages with Arts literacies relevant to the task.
4. Flexible scaffolding	Provide flexible scaffolding for arts learning tasks.
5. Community support	Provide support for parental knowledge and understanding through meaningful collaboration in an online community that facilitates interaction with the content, mentor and peers.
6. Accessible technological platforms	Make use of existing social platforms with which members are already engaged.

9.2.1.1 Design principle 1: Learner at the centre

Learner needs and interests as intimately understood by the parent/carer should drive the direction of learning tasks

In the initial set of draft design principles, that the learning design should “facilitate socially-driven, negotiated learning projects between parent/carer and learner” (draft design principle 2). However, when this principle was put into action in the learning design, participant responses indicated that such an overt focus on discussion and

negotiation of learning content did not align with the “more natural” or holistic approach to education they employed in their homes. Throughout all phases of the research process, I noted that the needs of the individual learners were central to the parents’ concerns and that they elicited these understandings very naturally through the course of living and learning together with their children. Whilst parents clearly tailored learning to meet their children’s interests and needs, “structured negotiation” was rarely noted. Instead, tailoring arts learning to the child was based upon an implicit understanding of the child’s needs or interests which bridged life and learning (Barratt-Peacock, 1997; Harding, 2011). As such, the draft design principle was updated in two ways. First, the wording was amended to reflect and honour the intimate understanding parents/carers have of their children, and to foreground that the child’s needs and interests should direct the learning tasks. Second, the design principle was shifted into first position, rather than its former position as the third design principle, to reflect its centrality to the learning process. This was reflective of the nature of learning in home education as revealed through my research, where the child’s needs and interests underpinned arts learning in participant families. It was equally reflective of a long line of educational theorists, researchers and practitioners who advocate for child-centred education (Dewey, 1897; Dinham, 2017; Doddington & Hilton, 2007; Froebel, 1885; Locke, 1925; Rousseau, 1979).

9.2.1.2 Design Principle 2: Authentic tasks

Facilitate situated, open-ended, learning tasks that represent real life situations or challenges in the learner’s context, in addition to providing opportunities to integrate the Arts with other learning domains.

This design principle represented an amalgamation of two draft design principles:

- draft design principle 1: Situate learning tasks in the family’s CoP; and
- draft design principle 2: Integrate arts learning in open-ended projects.

Each phase of the research confirmed that context was as an extremely important driver of arts learning for all participants. As such, situated learning, which “[connects] learning to the real, rather than the academic, world” (Barratt-Peacock, 1997, p. 106) was widely evident among participant families and an important feature

of participants' pedagogical approach with respect to arts learning. The role of the learning environment, therefore, was to provide supporting structures that supported families in facilitating such situated learning. Previously, integration of arts learning with broader learning domains had represented a separate design principle, however the project findings highlighted that such an overt focus on integration was only partially representative of the ways that participant families wished to engage with the Arts. Integration was confirmed as a useful approach to authentic arts learning, but equally, it was only one option, and opportunities to focus solely on the arts in a manner that suited individual contexts was equally appreciated by participants. As such, the integration of arts learning with other subjects was valued as an extension of authentic learning tasks, whereby the family's context, which included learning in broader domains, could inform and provide the context for the authentic learning tasks (see Brown et al., 1989).

9.2.1.3 Design Principle 3: Authentic arts learning

Promote effective strategies and support materials to assist parents/carers in developing arts learning that engages with Arts literacies relevant to the task.

A small but important refinement was made to draft design principle 4: "Determine specific learning tools required for the task and provide formal instruction regarding these 'tools' of the arts". This small change focused on more specific and illustrative terminology that enhanced the clarity of this principle. The former terminology, which referred to the development of "arts tools" was intended to faithfully relate the sociocultural concept of learning tools, and their role in authentic learning (Vygotsky, 2012/1962). However, such terminology was also potentially confusing. "Arts learning tools" could be misunderstood as practical strategies and physical resources, rather than foundational arts literacies that promote authentic and deep engagement with each arts learning domain. Further, this change in terminology helped to shift the focus of this design principle from what home educating *parents/carers* should do, to how the *learning design* could facilitate and scaffold *parents/carers* in developing authentic arts learning for their children.

9.2.1.4 Design Principle 4: Flexible Scaffolding

Provide flexible scaffolding for arts learning tasks

This design principle remained unchanged from the draft principles. The flexible scaffolding that was developed and refined through the three iterations of homeiswheretheartis.com.au included the development of learning guidelines, planning templates, community initiatives (the *Project of the Month*), webinars, and the provision of example projects and web-links. These support structures were found by participants to represent adaptable scaffolds that helped them to develop learning tasks relevant to the many facets represented in their individual contexts, including the family's philosophical approach to education, the child or children's stage of development, interests, social and cultural world, and learning needs.

9.2.1.5 Design principle 5: Community support

Provide support for parental knowledge and understanding through meaningful collaboration in an online Community of Practice that facilitates interaction with the content, mentor and peers

This design principle also remained largely unchanged. However, additional details to support draft design principle were developed, based upon understandings derived throughout the iterative research process. In particular, Gamma cycle data analysis had revealed that three elements were effectively at work within homeiswheretheartis.com.au's community interactions: participants were interacting with website content, with me as the mentor, and with each other as peers. These findings aligned closely with the Garrison et al. (2000) Community of Inquiry (CoI) model and Swan's (2001) research into aspects of successful asynchronous learning environments. The similarities between the three elements of educational experience in online environments recommended in these two models are tabled alongside the three elements at work in the homeiswheretheartis.com.au (Table 28). This demonstrates the congruence of my own findings regarding successful elements on my own online learning environment with two other online learning models. As such, the design principle was updated to include more specific scaffolding for the development of an online community which acknowledged the valuable role each facet played in supporting the community.

Table 28 Similarities between frameworks for online communities

The core elements of a successful online Community of Inquiry (Garrison et al., 2000)	The three forms of interactivity in online learning environments (Swan, 2001)	The three elements of the online CoP in homeiswheretheartis.com.au
Cognitive Presence	Interaction with content	Content interaction
Teacher Presence	Interaction with instructors, (teaching presence)	Mentor interaction
Social Presence	Active discussion among course participants	Peer Interaction

9.2.1.6 Design Principle 6: Accessible technological platforms

Make use of existing social platforms with which members are already engaged

This final design principle was an entirely new addition for online arts learning environments for home educators, based upon important insights raised through the iterative research process. In each iteration of the testing and refinement of homeiswheretheartis.com.au, findings affirmed how significant the usability of the technological platform was to the success of the learning environment design. Seemingly small features such as requiring participants to log in each time they accessed the site and community were found to have a negative impact on the frequency and volume of participant engagement. Lower levels of participant engagement further contributed to a ‘quiet environment’ which then reduced the likelihood of members sharing their personal experiences, which then had a circular effect on further reducing the incentive for participants to ‘log in’. However, making use of existing social platforms and communities with which participants were already engaged was found to have an immediate and positive effect on participant willingness and frequency of engagement. Wenger et al. (2002, p. 51) comments,

Because communities of practice are organic, designing them is more a matter of shepherding their evolution than creating them from scratch. Design elements should be catalysts for a community’s natural evolution. As they develop, communities usually build on pre-existing personal networks.

Such insights helped to highlight the importance of making use of existing networks and communities that were already operating successfully, rather than attempting to create a new community “from scratch”.

9.3 A model to represent the design principles

These revised design principles were synthesised in a model to express the overall theoretical approach in a visual diagram, which effectively helps to demonstrate the relationship between various principles. Most importantly, the diagram demonstrates how subsequent layers of the model support and contribute to the inner layers.

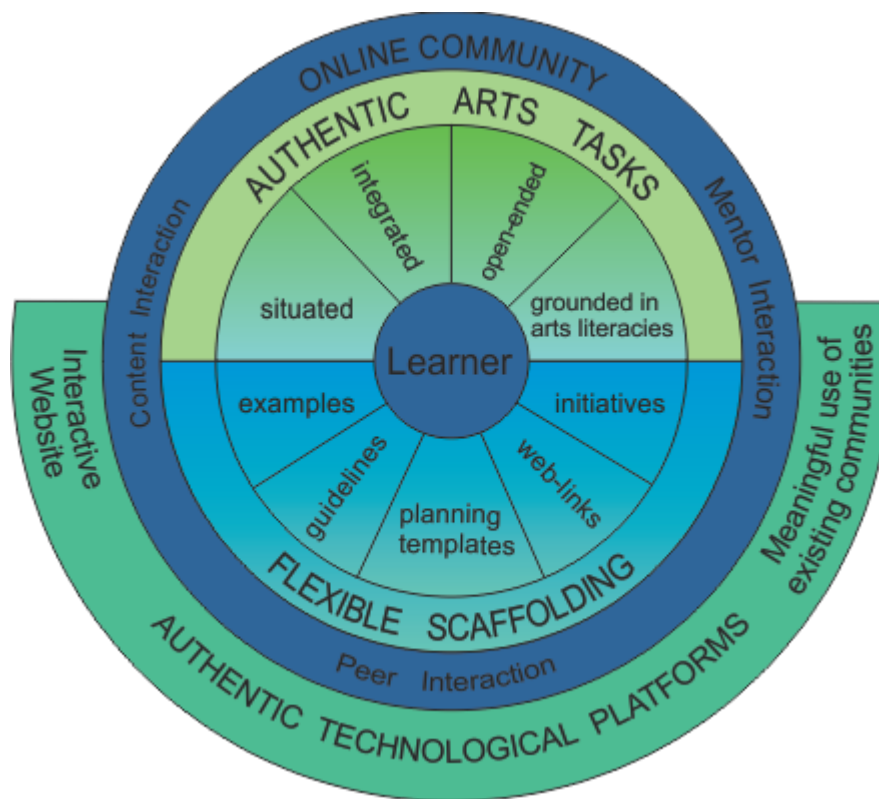


Figure 27 Authentic online arts learning design for home educators

The circular design allows for a visual representation of the design principles that foregrounds the central concern of authentic arts learning: the learner’s needs. The learning environment must therefore make explicit the ways in which learning may be designed by starting with the needs of the learner. The next layer indicates that resources to stimulate such authentic arts tasks are underpinned by flexible scaffolding. The provision of examples of learning tasks, guidelines and models, planning templates, web-links, and community initiatives are flexible scaffolds that

proved useful in homeiswheretheartis.com.au. Such flexible scaffolds are the foundation for the authentic arts tasks, promoted through the development of situated, integrated, open-ended learning tasks that are grounded in arts literacies, thus ensuring arts learning meets the criteria of authentic arts engagement. The subsequent layer shows that resources should be delivered within a supportive online learning environment that makes provision for members to interact with the content, gain access to mentorship from an arts specialist, and importantly, to engage with each other in social relationships that foster mutual support and encouragement. Finally, the choice of an online platform becomes the crucial foundation to the success of online learning environments. An interactive website that enables member contributions is fundamental to the continued development of useful and contextually relevant resources, in addition to providing a very clear link between the website resources and community interaction. Further, making use of existing social networks of home educators will ensure that members encounter community discussions and contributions in the course of their usual social interactions, ensuring a lively, easily-accessible and thus active community that does not require members to “go out of their way” to contribute.

9.4 Designed products – practical research outputs

In addition to acting as “crucibles for the generation and testing of theory” (Cobb et al., 2003), the designed products that are generated and refined through the DBR process represent practical, empirically-sound solutions in response to an experienced problem in a specific context. Whilst the design platform represents the context through which theory may be advanced, it is equally imperative that the impact of the learning in an authentic context is justified as valuable (Barab & Squire, 2004). The learning environment: homeiswheretheartis.com.au, is the major practical research output of this study. Through the iterative process of testing and refining this learning environment, the study has affirmed the value of this designed product through its beneficial impact on the arts learning of participating home educators. The majority of participants found that their involvement in the homeiswheretheartis.com.au and associated research not only enhanced their appreciation of the arts, but also deepened their engagement with more authentic forms of arts learning and helped them to feel that arts learning was more achievable in their context.

The website as a whole represents the project's major practical output; however it contains a number of valuable arts learning resources which stand in their own right as important practical research outputs which could be used independently of the homeiswheretheartis.com.au learning environment. These include the Guide to the Arts across the curriculum (GAAC), the Arts Planning Template, tutorial videos, and Project Gallery. These resources are considered useful for educators in a variety of educational contexts, including classroom teachers. The implications of this research project and the utility of findings for broader educational contexts are now explored.

9.4.1 Implications of the research

It is the goal of the Design-Based researcher to bridge the theory/practice divide (Barab & Squire, 2004), and this project's findings have demonstrated the contributions that have been made to both theory and practice which have implications for home educators, broader educational contexts and educational policy makers.

9.4.1.1 Implications for home educators

The most fundamental implication for this project is the website and online community that have been developed throughout the research process, and which continue to operate and support home educators in facilitating a quality arts education with their children. Extensive research has demonstrated the role the Arts play in enhancing academic, personal, social and cultural outcomes, whilst developing the very dispositions considered vital for twenty-first century citizenship, including creativity, resiliency and innovative thinking (Eisner, 2009; Ewing, 2010; Ministerial Council on Education Employment Training and Youth Affairs, 2008; United Nations Educational Scientific and Cultural Organisation (UNESCO), 2006; Zhao, 2012). The number of families opting to home educate their children in Australia is growing rapidly, and many of these parents/carers do not possess qualifications in education or the Arts, meaning that the provision of quality resources to support their teaching in the Arts is both important and timely. The provision of support and encouragement via accessible online platforms such as homeiswheretheartis.com.au can thus have important implications for enhancing arts learning (and therefore, the benefits associated with a quality arts education) for a growing number of children whose families choose this educational option. Whilst the website is aimed at Australian

home educators and provides support for interpreting and responding to the requirements of the Australian Curriculum, the resources and approach to Arts learning advocated in homeiswheretheartis.com.au would also be of benefit to home educators around the world.

9.4.1.2 Implications for broader educational contexts

An important feature of Design-Based Research is the development of design principles that are reusable (Herrington et al., 2007) and that transcend “the environmental particulars of the contexts in which they were generated, selected, or refined” (Barab & Squire, 2004, p. 5). The design principles developed via this study are targeted at a very specific educational sector: online Arts learning environments for home educators; however I argue that these principles are useful for learning design in broader educational contexts when interpreted and applied with the specific requirements of educational contexts in mind.

Research has highlighted that the facilitation of Arts learning in classroom contexts is challenging for generalist classroom teachers, who often feel ill-equipped with regard to requisite arts competencies through pre-service training, and who lack access to appropriate support and resources (Alter et al., 2009a; Bamford, 2006; Dinham, 2007; Russell-Bowie, 2011). Most of the challenges experienced by home educating participants in this project with respect to teaching their children about the Arts mirrored the challenges experienced by generalist classroom teachers. This suggests that the design guidelines underpinning homeiswheretheartis.com.au may be useful for the design of online arts learning environments for supporting classroom teachers. As an online approach to supporting arts learning, the design principles could potentially be used to facilitate flexible and convenient professional development for classroom educators, and enable the sharing of teacher strengths throughout Australia regardless of location. This is considered particularly useful with the rollout of the Australian Curriculum, the criticism of the lack of professional development in some curriculum areas (Dabrowski, 2016).

Beyond the generalisability of the design principles, the resources within homeiswheretheartis.com.au may be beneficial for classroom teachers, and indeed, a number have already joined as members of the homeiswheretheartis.com.au following

completion of the research. During the research process, I had been approached by pre-service teachers, classroom teachers and a Family Day Care provider who had heard about the website, asking if they would be able to join. This suggests that the kind of support provided by homeiswheretheartis.com.au might be useful in broader educational contexts. During final interviews, participants were asked how they felt about classroom teachers joining the community in homeiswheretheartis.com.au and the response was generally positive, although with some reservations as to whether uploads from classroom teachers to the Project Gallery would be useful in the home context. Therefore, to ensure the integrity of homeiswheretheartis.com.au as a space primarily for the support of Arts learning in home education contexts, the requirement of moderator approval for all projects uploaded to the Project Gallery was instigated to ensure that uploaded projects align with the site's focus and are also useful to home educators.

Whilst I have argued that home education differs in its pedagogical approach from institutional classroom contexts, Jackson's (2015) research with home educators and professional institutional educators highlights that educational institutions could benefit from understanding and implementing the sociocultural approaches characteristic of home education. Similarly, many educational theorists and researchers maintain that institutional education should move from traditional, transmission-oriented instructional design to a learner-centred approach based on constructivist and sociocultural principles (Brown et al., 1989; Grabinger et al., 2007; Lave & Wenger, 1991; Rogoff, 2008; Vygotsky, 2012/1962). As such, I believe that the sociocultural underpinnings of this project's design principles, with a focus on a learner-centred, contextually-responsive pedagogy, could be readily adapted to online learning design supporting the generalist classroom teacher.

9.4.1.3 Implications for understanding and regulating home education

The findings of this research are considered useful for educational regulators and policy makers. My research supports the findings of a number of previous Australian studies that identify home education as pedagogically unique from institutional forms of learning which is best understood as a form of sociocultural practice (Barratt-Peacock, 1997, 2003; Harding, 2011; Jackson, 2009, 2015). This understanding raises important implications for the regulation and registration requirements of home

educating families. Currently, each Australian state or territory is responsible for the regulation of home education within their jurisdiction, and this has led to a variety of requirements, which can range from rigorous registration that requires parents/carers to conform to that state's syllabus for schools (see Board of Studies Teaching and Educational Standards NSW (BOSTES), 2014), to more flexible approaches that recognise and support a parent's right to choose the educational approach that best suits their family (see Tasmanian Home Education Advisory Council, 2017). Recent legal proceedings and issues, such as the New South Wales 2014 parliamentary inquiry into home education and Tasmania's 2016 Draft Education Bill, demonstrate how the growing number of home education registrations throughout Australia are leading to regulatory reviews. This highlights the need for decisions to be based upon the growing body of research into home education. I believe the findings from this project provide important contributions into understanding the variety of approaches home educators use in supporting the unique needs of their children, especially with regard to arts learning. I have further identified that whilst quality learning is occurring in a number of home education contexts, specific targeted support that works with the unique needs of home educators, rather than strict regulatory expectations, is more likely to provide a 'way forward' that promotes quality learning in home education.

The attitude of participants in this study toward regulatory requirements varied, but in general, participants viewed the Australian Curriculum as a useful, but not mandatory guide. Participants emphasised the importance of the intimate understanding they have of their children's needs and the centrality of a more authentic, holistic educational approach. Based upon such insights, I concur with the Home Education Advisory Committee that the demands placed upon home educators by some regulatory bodies to align home education with state syllabi are "inappropriate and unreasonable" expectations (Home Education Association Australia, n.d., p. 1) that do not permit parents/carers to make contextually-informed decisions about their children's education, thus working against the natural processes evident in many home educators' practices. Instead, it is my recommendation that alternative expectations that embrace the range of educational approaches employed by home educators and that value alternative educational approaches should form the basis of regulatory demands (Home Education Association Australia, 2016).

9.5 Research questions and findings

This project sought to explore the following overarching research question:

How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?

The final design principles and accompanying model in Figure 27 represent an empirically-grounded response. These design principles provide future learning designers with flexible guidelines that may be applied to similar contexts in order to design online learning environments for arts learning in home education. Importantly, the design principles may also be adapted for related contexts, as explored in the Implications section (9.4.1) of this chapter. The practical research output of this project: homeiswheretheartis.com.au represents an applied answer to this overarching research question, demonstrating a practical, tested example of how online learning environments for creative arts engagement can be designed to meet the specific needs of Australian home educators. The project's design principles and resultant website were developed using sociocultural principles, and the research confirmed that sociocultural theory is a cogent means to understanding the pedagogical approach characteristic of home educating participants, and that applying sociocultural theory to the design of arts learning environments is a suitable framework for learning design for the home education context.

Sub questions under this overarching question were also posed at the outset of the project, and research outcomes in response to these are now explored.

9.5.1 Research sub-question 1

How do Australian home educators facilitate and deliver arts education for their children?

In Chapter 1 and Appendix A, I demonstrated how my own immersion in the research setting as a former home educating practitioner, coupled with findings from a survey of almost 200 Australian home educators, helped to identify a number of shared difficulties and needs regarding the facilitation of Arts learning in home education. Identifying these commonalities provided a focus for the design of a support resource

that made use of the home educating community's strengths whilst addressing their specific difficulties and expressed needs. This was explicated in Chapters 4 and 5, which outlined how the prototype of homeiswheretheartis.com.au was developed in response to an understanding of identified needs and informed by relevant research and theory.

Further insights into how home educators facilitate and deliver arts education for their children were revealed in increasing depth during the effectiveness evaluation of the design solution, explored in depth in Chapters 6, 7 and 8. Through participant responses and engagement with homeiswheretheartis.com.au, insights into processes used by home educators in facilitating an arts education were gained. These findings highlighted the centrality of individual context in determining the strategies employed and processual approach to arts learning. Importantly, the research confirmed that arts teaching and learning was visibly embedded in each family's sociocultural practice, helping to confirm previous research (Barratt-Peacock, 1997, 2003; Harding, 2011; Jackson, 2015). This understanding underpinned the refinement of the final design principles, which are firmly rooted in sociocultural theory; and stimulated the development of a model to express the major processes in home educators' approaches to creative arts learning (see Figure 16 in Chapter 7).

9.5.2 Research sub-question 2

What design principles are suitable for the design of online arts learning environments for Australian home educators?

In Chapter 2, I explored previous research into Australian home education that identified the unique pedagogical approach of home educators, maintaining that this is best understood as a form of sociocultural practice (Barratt-Peacock, 1997; Harding, 2011; Jackson, 2009, 2015). Consequently, in Chapter 4, I argued that sociocultural theory provided a suitable theoretical foundation for the development of a design solution for arts learning in home education. Draft design principles were thus developed by investigating existing guidelines and models for home education, arts education, and online learning environments using a sociocultural lens. The resultant draft design principles, grounded in this theory, were the basis upon which the prototype of homeiswheretheartis.com.au was developed. Through the iterative

process of testing and refining of the website with participant home educators, the draft design principles were evaluated and refined.

9.5.3 Research sub-question three

How is the project's online learning environment effective for home educators in facilitating a quality arts education?

The impact of homeiswheretheartis.com.au and the extent to which it had been successful in attaining the project aims of supporting and enhancing quality arts engagement was discussed in Chapter 8. The study revealed that the majority of participants who provided responses through surveys and interviews found homeiswheretheartis.com.au helpful to their arts teaching and learning. This suggests that the draft design principles developed for homeiswheretheartis.com.au represented a useful foundation for the design of online learning environments for arts learning in home education. Importantly, a number of features of homeiswheretheartis.com.au were found directly useful in facilitating a quality arts education. These included the website's function of intentionally raising the consciousness of the value of the Arts and of authentic arts learning, and the inclusion of a comprehensive variety of easily-implemented resources which provided direction for learning tasks and which were adaptable to individual contexts. These findings then contributed to the refinement of the project's final set of design principles represented earlier in this chapter.

9.6 Limitations of the study

The practical and theoretical outcomes of this research, as represented in homeiswheretheartis.com.au and the final set of design principles, are considered beneficial for achieving this project's intended aim of supporting and enhancing authentic arts engagement for Australia's home educating community. In acknowledging these outcomes, I also recognise certain limitations within the project's design and delivery that may serve to limit the credibility of the findings.

My role as a former home educator who identifies positively with the home education movement raises potential issues of bias towards home education and assumptions regarding its effectiveness as an educational option. Further, issues of researcher bias

are raised by my dual role as both the designer and critic of the design's effectiveness – a problem faced by all DBR researchers (Anderson & Shattuck, 2012; McKenney et al., 2006). Rather than attempting to “overcome” bias, I worked in a manner that acknowledged my bias, enabling me to also develop critical self-scrutiny (McDougall, 2004). My inherent bias was valuable, permitting me to engage deeply and sensitively with participants and emerging issues, and to work towards something which mattered personally: learning design that genuinely enhanced the experience of Arts teaching and learning for my participants and the wider home educating community. Nevertheless, I recognise that my position as both the researcher and gatekeeper of what to include or exclude in the final outcomes opens the project to scrutiny. Strategic steps were taken with this in mind, including foregrounding how the research was constructed throughout the thesis, and a commitment to negative case sampling and the representation of narratives and viewpoints of participants, even if these created tensions within the research.

Additional limitations were raised by a number of challenges regarding data collection, which have been reported in each of the iterative phases of testing and refinement of homeiswheretheartis.com.au. Low survey response rates and low levels of visible participant contribution to the website's collaborative features meant that design decisions were based upon data from less than half of the registered participants. It is possible that families who found the website useful were those who persisted with project participation and contributed the most data, thus potentially skewing results towards a more favourable view of the website and its design direction. Further questions may readily exist regarding the extent to which social ties that developed between myself and the interview participants might have influenced the research results. The possibility that a positive relationship between both parties led to overly favourable results must be acknowledged. It is thus important to consider that project findings have arisen from a small, sample of Australian home educators and therefore should not be taken as broad generalisations about arts learning across Australian home education.

Finally, the timeframe required to complete a doctoral thesis placed restrictions on this project that limited a more thorough understanding of the design's effectiveness. Not only would a longer time-frame have permitted a more thorough exploration of the

effectiveness of the final design changes, it would also have potentially facilitated a stronger online CoP through the development of “a set of relationships *over time*” (Lave & Wenger, 1991, p. 98; italics mine).

Design-Based Research is a socially responsible undertaking, foregrounding the problems of practitioners in the research and development process, but equally this makes it “inherently exploratory and speculative” (Herrington et al., 2007, p. 9). These limitations do not detract from the positive outcomes of the research project for those involved; they serve as a reminder of the contextually-dependent nature of any research undertaking, which opens up possibilities for further research.

9.7 Recommendations for future research

This research project provided the opportunity to study the educational approach, attitudes and Arts learning strategies of five home educating families in depth, and more general perspectives and opinions of a wider group of home educating families with respect to the way they facilitate and deliver Arts learning for their children. A number of questions have been raised throughout this process that open up future possibilities for research. Primarily, further research that evaluates the effectiveness of the design principles and learning environment over a longer period of time is recommended. Follow-up interviews with participating families would help to reveal whether their intended goals as expressed in the final interviews were carried out, and to what extent the learning environment positively impacted practice once researcher engagement with participants was withdrawn. Whilst observations were made throughout this research as to perceived growth in the quality of arts projects submitted by participants through the course of the design solution, this could be explored in greater depth through successive research to further ascertain if the design principles and learning environment were achieving the project’s aims of supporting and enhancing arts learning in home education. Research to evaluate the effectiveness of the design principles in related contexts, including primary classrooms is also recommended.

This project revealed a gap in understanding regarding how Australian home educators facilitate learning in the Arts, and whether the general pedagogical approaches to home education, as revealed in a number of studies, including the foundational work of

Barratt-Peacock (1997), Thomas (1998) and Jackson (2009), are true for learning across all subject areas. Further, a qualitative observation gained through discussion with home educating participants in this study was the extent to which parental background was influential in the home educating environment. The educational, personal and professional background of home educators was observed to influence both a parental sense of confidence and competence in facilitating Arts learning, and the extent to which they allocated time and resources to this subject area. More extensive research into strategies that home educating parents/carers employ when teaching their children about discreet subjects in which they possess little background experience is recommended. Such research will assist in the provision of more targeted support for home educators, in addition to forming helpful understandings that can inform educational policy makers and regulators.

9.8 Post script

An important personal goal for this research was the development of a genuinely beneficial support for home educators that would continue beyond the life of the project. This thesis thus concludes with something I consider to be just as significant as the research process itself: the continuing story of homeiswheretheartis.com.au.

Upon completion of the collection and analysis of data through homeiswheretheartis.com.au, the final version of the website was released publicly. Owing to the initial set-up of the learning environment as a research space accessible only to participants who had agreed to the informed consent process, the website needed to be re-released in a renewed format requiring all existing members to sign up anew. Within two weeks, the re-released site had attained over 80 members. Ongoing site statistics demonstrate that the homeiswheretheartis.com.au receives regular traffic from both new and repeat users, and members continue to interact via the closed Facebook group. Members now include home educators, pre-service teachers, and classroom educators. The website has also gained the interest of a local school of distance education. Based upon these early successes, it is hoped that homeiswheretheartis.com.au will continue to grow and provide Australian home educators with the very support and empowerment in Arts learning it set out to achieve, with the additional potential to positively impact wider educational contexts.

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Appendices

Appendix A. Phase One needs analysis summary

Data collected

- a) Researcher immersion in the research context;
- b) A coded internet survey of the general home school population with 192 adult participants to ascertain issues and challenges related to teaching the arts in their own practice via multiple choice answers and one short response;
- c) A single focus group setting, involving 2 adult participants, who discussed their experiences, challenges and successes in facilitating arts learning in home education. Their thoughts and opinions were also sought on the development of the prototype arts resource; and
- d) Participant emails.

Data analysis

Phase One data analysis was approached according to the following sequential approach:

1. Qualitative and quantitative data arising from responses to the survey questions was read through to gain a sense of the “whole”;
2. Quantitative survey data was read and memos created as to emerging understandings and implications of the survey responses;
3. Quantitative data and memos on this data were then reflect upon through the lens of the Phase One research questions, which generated further memos;
4. Filters were applied to survey responses to look for patterns among responses to different questions, such as possible correlation between the confidence of parents/carers and their use of prescriptive resources, which generated further memos on the quantitative data;

5. Qualitative survey responses were re-read and first-round coding was conducted, inductively generating codes emerging from participant responses;
6. Understandings generated to this point were used to inform the questions asked in the focus group setting;
7. The focus group recording was transcribed, and first-round coding conducted, which utilised and further contributed to codes identified via open response survey data;
8. Reflection on the emerging codes from qualitative data, in relation to my own experiences, personal emails from participants regarding their thoughts on specific needs regarding their arts engagement, and how my own experiences differed from some responses yielded interesting insights that were recorded in memos;
9. After reflection on qualitative and quantitative data and associated memos arising from the survey, second round coding was conducted through the lens of the three Phase One research questions.

Outcomes

Engagement with the Phase One data using the process above highlighted the importance of developing a learning support resource that represented:

- a central repository that would save them time in having to navigate the plethora of information available on the web;
- support from other home educators who had strengths that could be shared;
- confidence-building resources that provide inspiration or guidance, especially when lacking in the home educating parent(s);
- affordable ways of engaging with the arts;
- integrated arts learning that helped make sense of both the arts and other subjects under study, and helped their children appreciate the arts as a valuable part of life;

- assistance in meeting Australian Curriculum standards; and
- structure and flexibility such that arts learning might be approached sequentially, yet with the option to apply the learning with flexibility to their unique contexts.

These many needs were reflected upon and a search for patterns conducted with respect to how they indicated needs that might shape the proposed design solution, which generated the following three themes. An arts resource that met the needs of Australian home educators with regard to arts learning would need to provide:

- **Utility.** This could be achieved through:
 - A central repository and learning space – a “one-stop shop” that saves home educators time in finding quality arts resources;
 - Useful approaches that facilitate inexpensive arts learning;
- **Support and empowerment.** This could be achieved through:
 - An online Community of Practice (CoP) – a support community to ask questions, share learning, and develop new insights with other home educators;
 - Empowering individuals in their own communities – supporting and promoting arts engagement in local communities;
- **Direction.** This could be achieved through:
 - the provision of inspiration and guidance for arts engagement ideas in the home education context;
 - strategies to support integrated and interest-led arts learning; and
 - the promotion of authentic, situated learning approaches.

A number of foundational understandings were held at the start of this project that influenced my thinking towards arts engagement in home education, and that were

consequently confirmed or modified through Phase One data collection and analysis. I completed this phase with the following understanding of the problem in context:

- a) Arts learning in home educating contexts is largely dependent upon the nature of the family's context, including:
 - a. the skills and confidence of the home educating parent(s) in the arts;
 - b. interests of the children and/or parents/carers;
 - c. services and opportunities available to the family in their community;
and
 - d. family finances;
- b) The arts can present a challenging learning domain within the home education context. The specific challenges include:
 - a. small class sizes, and sometimes single student contexts, making collaborative arts learning challenging;
 - b. the pedagogical uniqueness of home education which highly values individual student interests and therefore poses challenges if students are disinterested in certain aspects of the arts; and
 - c. a dearth of resources that are specifically geared to home educators in Australia that address all five Australian Curriculum arts subjects: Dance, Drama, Media Arts, Music and Visual Art.
- c) There are many home educators who feel successful in certain aspects of arts learning in home education. Sharing these experiences can empower the home educating community, but provision for this sharing on a nation-wide and accessible platform is not yet occurring.

Importantly, Phase One data analysis revealed that a good proportion of participants felt satisfied with their current arts engagement and confident with their methods of facilitation. This important understanding modified my understanding of the problem,

highlighting the importance of generating a resource that valued and gave voice to these competencies such that other home educators might benefit.

Appendix B. Phase One Internet survey

Instructions: For multiple choice responses, please choose the answer/s that most accurately describe your experience. At the end of some questions, there is an opportunity to include “other helpful information”. You may use this section to include any additional information you feel is helpful to add additional insight into your response. Short response questions require only brief details.

Perceptions and attitudes.

1. Which of the following best describes your perception of yourself?

- a) I feel confident about my ability to deliver quality arts learning.
- b) I feel somewhat confident about my ability to deliver quality arts learning.
- c) I lack confidence about my ability to deliver quality arts learning.

2. Which of the following best describes your attitude towards the arts?

- a) The arts are extremely important and are an essential part of our learning.
- b) The arts are important and we attempt to include them frequently.
- c) The arts are important; however other key subject areas are given priority if time constraints become tight.
- d) The arts are an enjoyable aspect of learning, but are non-essential.
- e) The arts are unnecessary in learning.

3. Which of the following best describes your perceived needs in facilitating arts learning?

- a) I feel inspired and clear in the direction I need to take.
- b) I am looking for inspiration and direction, but still feel happy with our current approach.
- c) I am looking for inspiration and direction.
- d) I am without inspiration and direction but have not been seeking them.

4. Which of the following best describes your perception of your children’s arts learning over the last year?

- a) I am extremely satisfied with the quality of my children’s engagement with the arts.
- b) I am mostly satisfied with the quality of my children’s engagement with the arts.
- c) I am unsatisfied with the quality of my children’s engagement with the arts.

- d) I am unconcerned about engaging my children with the arts.

5. Please outline what you find most challenging about delivering an arts education.

Approaches

6. Which of the following best describes your approach to teaching and engaging children in the arts? You may select more than one.

- a) I/We provide resources and opportunities and let our children spontaneously explore the arts without the need for adult intervention.
- b) We follow our children's interests and provide opportunities (which may include focussed learning or lessons) in these areas.
- c) We lead our children through planned arts experiences, using their interests as the foundation of the experiences.
- d) We lead our children through planned arts experiences.
- e) We predominantly integrate the arts with other subject areas.
- f) We don't intentionally include the arts in our learning.
- g) Other helpful information?

7. Do you use pre-prepared arts curricula or texts:

- a) All of the time?
- b) Most of the time?
- c) Some of the time?
- d) Never?
- e) Other helpful information?

Demographics

8. Please identify the age range represented by the children you are currently home educating who are of school age, including how many children are in this age range.

- a) number of children 3-6 years:
- b) number of children 7-10 years:
- c) number of children 11-14 years:
- d) number of children 14+ years:

Prize Draw

9. If you wish to go into the draw for a \$100 Booktopia voucher, please provide your name and email address below. If you wish to remain anonymous, please leave this answer blank.

Name:

Email Address:

Further involvement

10. This survey is the first step in a larger research project. The project is very practical: I will work with home educators to design an online support resource for the arts, and each participating family will be able to trial this resource with their children and provide feedback in order to improve it. At the end of the project, it is hoped that the collaborative arts learning space will be something that is genuinely useful and helpful for all Australian home educators in delivering a great arts education. I am therefore seeking interested families to be part of this exciting process. If you would like to take part, or to find out more, please provide your contact details below and I will forward further information. Many thanks for your consideration!

Name:

Email:

Appendix C. Overview of research process

Research Question:	
<i>“How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?”</i>	
Phase One: Analysis of practical problems through collaboration with practitioners	
Sub-questions	<p>How do Australian home educators facilitate and deliver arts education for their children?</p> <p>Guiding questions include:</p> <ol style="list-style-type: none"> a) <i>What specific difficulties do home educating parents/carers experience regarding the incorporation of the Arts into their children’s education?</i> b) <i>What do home educating parents/carers identify as specific needs that, if fulfilled, would assist in facilitating a quality arts education practice?</i> c) <i>What existing knowledge and strengths do home educators possess regarding arts education, and how might these be harnessed to benefit the home educating community?</i>
Action	<p>My immersion in the home school setting was used in conjunction with newly developed insights with participants in this project to confirm or modify my understandings of the problem in order to ensure that the project would be meeting an experienced need.</p>
Data collection	<ol style="list-style-type: none"> e) coded internet survey of the general home school population targeting 200 adult participants to ascertain issues and challenges related to teaching the Arts in their own practice - multiple choice answers and one short response; and f) focus group setting, involving two home educating families, who were asked to discuss their experiences, challenges and successes in facilitating arts learning in home education. Thoughts and opinions were also sought on the development of the prototype website.
Data analysis	<p>Inductive interpretive thematic analysis was used to identify key themes in response to each of the Phase One research questions which then provided understanding as to the type of strategies that might be useful for Phase Two: the development of the prototype design solution, such that it reflected how home educators engaged with the Arts, valued the strengths they possessed, and fulfilled their specified needs.</p>

Phase Two: Formative evaluation - Development of solution(s)	
Sub-questions	<p>What design principles are suitable for the design of online arts learning environments for Australian home educators?</p>
Action	<p>Draft design principles were developed, by synthesising key understandings from design guidelines, research and heuristics across the relevant fields of home education, arts education and online learning. Following the development of draft design principles, data arising from Phase One needs analysis were used in conjunction with the draft design principles to guide the development of the prototype website design. Expert consultation was conducted to refine the prototype website prior to release to home educating participants.</p>

Data collection	<ul style="list-style-type: none"> c) engagement with literature to identify existing models, heuristics and learning theory that guided the development of the draft design principles; d) interviews with three experts in relevant fields to this project, including online learning, arts learning and home education. Their expertise was sought regarding the prototype design solution, focussing upon best practice in their relevant domain and how the learning design might best meet this. e) an anonymous internet use survey to the participants who intend on participating in the design solution to ascertain internet and computing access and skill level, and thoughts and opinions on the prototype website via short responses and Likert rating scales.
Data analysis	Expert consultations were analysed interpretively, with a very strong focus on understanding the literal suggestions for improvement of the website prior to its release to the participants in Phase Three. The Internet use survey provided helpful guidance as to the level of computing access and skills participants possessed, in addition to preferred ways of accessing information online, such that the design solution was able to be readily accessed and used.

Phase Three: Iterative testing and refinement	
Sub-question	How is the project's online learning environment effective for home educators in facilitating a quality arts education?
Action	Evaluation and refinement of the website was conducted in three consecutive iterations, based upon analysis of feedback and perspectives of home educating participants.
Data collection	<ul style="list-style-type: none"> f) Three anonymous internet surveys towards the completion of each iteration of the trial regarding usability, effectiveness and possible improvements of the design - multiple choice, short answer and Likert scale ratings. g) Web log data, including website analytics, forum postings and Project Gallery uploads from participants. h) Any email communication between myself and participants specifically regarding their involvement in the project. i) Semi-structured 1-hour interviews (15) with five adult participants engaged in using the website. Each of these participants were interviewed three times, towards the completion of each iteration of the website, to ascertain their experience with the website, including challenges, successes and thoughts for improvement. One interview participant was interviewed via Skype, owing to her remote location. j) Observations (8). The four interview participants who were interviewed in their own homes agreed to two observation sessions of arts learning in action in conjunction with their final two interviews. Field notes, and photographs of children and their artworks were taken for analysis.
Data analysis	Interpretive thematic analysis was used. Survey data and web-log data helped to identify patterns in participant feedback regarding their use of, and response to, the design solution. Interviews provided particularly rich insights regarding the lived experience of participants with regard to their arts practices and thoughts on the design solution, and observations provided greater insight into

	how home educators taught and engaged with the Arts, and how the design solution was being used in different contexts.
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Phase Four: Reflection to produce design principles	
Sub-question	How can online learning environments for creative arts engagement be designed to meet the specific needs of Australian home educators?
Action	Knowledge and product outputs were generated: design principles for learning design for home educators/online arts support and paths for future research in this field. These all-important design principles contained “substantive and procedural knowledge with comprehensive and accurate portrayal of the procedures, results and context, such that readers may determine which insights may be relevant to their own specific settings” (Herrington et al., 2007, p. 4095).
No data are collected in this phase. The focus is upon enhancing design implementation in related contexts through the generation of design principles.	

Appendix D. Computer usability survey

On average, how often do you use the Internet?

1. Almost never
2. Once per month
3. Once per week
4. Almost daily
5. Numerous times per day

Where do you access the internet? Please select all that apply.

1. Home
2. Work
3. Library
4. Café/Internet kiosk
5. On a mobile device using mobile data

Which of the following do you use? Please select all that apply.

1. Browsing/searching
2. Email
3. Online chat
4. Discussion forums
5. Social media
6. Video streaming

What devices do you feel proficient using? Please select all that apply.

1. Desktop computer
2. iPad/tablet
3. iPhone/smartphone
4. Digital camera
5. Digital video recorder

How frequently is your internet use hampered by poor Internet speeds?

1. Very Rarely
2. Rarely
3. Sometimes
4. Often
5. Very often

On average, what percentage of your family's Internet access is related in some form to home education?

1. Less than 10%
2. 10 – 50%
3. 50% - 80%
4. More than 80%

Approximately what percentage of your own use of the Internet is spent seeking home education resources, support, or inspiration?

1. Less than 10%
2. 10 – 50%
3. 50 – 80%
4. More than 80%

What software have you or your children used? Please select all that apply.

1. Photo editing software
2. Video editing software
3. Audio editing software
4. Presentation software
5. Publishing software
6. Artistic software (eg... drawing and painting applications)
7. Stop motion animation software

Please rate your confidence level with the following

1. Emailing file attachments
2. Logging in to password-protected sites
3. Communicating in online forums
4. Uploading photos to forums or social media
5. Editing photographic images
6. Editing video footage
7. Uploading video footage to online sites (eg YouTube)
8. Using audio software to record and edit audio (eg Garage Band or Audacity)
9. Creating presentations on Presentation software (eg PowerPoint)

How willing are you to learn new computer-use skills?

1. Not willing
2. Moderately willing
3. Very willing

Appendix E. Phase Three expert consultation interview questions

Expert Consultation One: Online Learning

Specific questions regarding the website's adoption of sociocultural principles in teaching and learning.

To answer the following two questions, please briefly read through the Integrated Arts Framework pages. There is no need to engage deeply with the pages dedicated to specific arts skills.

1. It is the aim of this website to facilitate constructivist approaches to arts learning in home environments. The website intends to stimulate parents and children to engage in authentic learning experiences that are grounded in the immediate sociocultural context of individual homes. Do you think that the structure of the Integrated Arts Framework can genuinely facilitate this aim? Please briefly explain your response.
2. The Integrated Arts Framework will be used by parents with varying arts and teaching knowledge. How effective do you think the Integrated Arts Framework (and supporting forum) will be in providing direction and support for parents with little knowledge and understanding in arts education? (I am seeking your feedback on my pedagogical approach rather than insight into arts-related issues).
3. The website is intended to stimulate the development of an online community of practice (grounded in sociocultural principles of learning). How effectively has the site been developed to stimulate and support this aim? Suggestions for improvement are welcomed.

General feedback on the website

4. How easy and logical was it to navigate through the website? Please provide any features you found helpful or confusing. Suggestions for improvement are welcomed.
5. How user-friendly is the technology that has been incorporated into this website? You are welcome to play around in the Gallery and upload some files to ascertain this.
6. Any other comments or feedback?

Expert consultation 2: Home education

Specific feedback regarding the website's relevance to home educators

1. In your opinion, how relevant to the needs of home educating parents is this project's Arts Support Resource?
2. Given your understanding as to the diverse and unique pedagogical needs of home educators, do you feel this website will meet the needs of this diverse population? Why/why not?
3. Do you have any suggestions for how this site could better meet the needs of home educators?
4. What potential benefits do you see for this resource as a means to empower home educating parents with confidence and competence in delivering an arts education?
5. Any other thoughts or feedback?

General feedback on the website

1. How easy and logical was it to navigate through the website? Please provide any features you found helpful or confusing. Suggestions for improvement are welcomed.

Expert Consultation Three: Arts Education

Specific feedback regarding the website's approach to arts learning

1. Based upon an understanding of home education as sociocultural practice, an integrated arts model was chosen as the most ideal means of developing arts engagement in home education contexts. In your opinion, how effectively does the Integrated Arts Framework support and encourage high quality integration (syntegration)? Please briefly explain your response to this question.
2. Do you perceive that the website has achieved a successful balance between integrating arts learning and valuing each art form as a valuable discipline with discreet skills that require specific teaching? Suggestions for improvement are welcomed.
3. Many home educating parents are unfamiliar or lacking confidence with the Australian Curriculum, and many do not acknowledge its relevance to learning in the vastly different context of home education. Given this, do you feel the website adequately scaffolds an approach to using the curriculum that honours the curriculum intent whilst honouring home education as pedagogically unique and therefore not bound to exact curriculum requirements?

4. How do you rate the quality of arts learning represented in the website? What thoughts do you have to enhance the quality of arts learning represented in the website?
5. Any other thoughts or feedback?

General feedback on the website

1. How easy and logical was it to navigate through the website? Please provide any features you found helpful or confusing. Suggestions for improvement are welcomed.

Appendix F. Phase Three anonymous internet surveys

Alpha cycle questions

1. In order to better understand how homeiswheretheartis.com.au meets the needs of different approaches to home education, please select the description below that best describes your approach to home education:
 - a) Eclectic
 - b) Structured
 - c) Unschooling/Natural Learning
 - d) Unit Studies
 - e) Classical
 - f) Charlotte Mason
 - g) Other (please specify)
2. Please briefly explain why you signed up to homeiswheretheartis.com.au
3. What level of engagement have you had with homeiswheretheartis.com.au? Please briefly explain your answer.
 - a. I have signed up but not really looked through the site
 - b. I have quickly glanced over the whole site, but not used any of the materials or ideas
 - c. I have looked through the site in a reasonable amount of detail, but have not used any of the resources or ideas
 - d. I have engaged soundly with the site (or aspects of the site) and have used some of the ideas
 - e. I have engaged soundly with the site (or aspects of the site) and have found the content and ideas helpful to our arts engagement
4. The site provides ideas and resources for integrating the arts into your unique home. Please indicate the extent to which you have made use of the following resources listed below using numbers between 1 (I have not used this or looked at this) – 5 (I have used this and found it to be helpful) to designate your choice:
 - a. Integrated Arts Framework:
 - b. Project Gallery
 - c. Forums (this does not mean you may have posted, but that you have accessed the forums)

- d. Library
 - e. Webinars/in-person
 - f. Meetings/ recorded tutorial
 - g. Facebook closed group
5. This question asks for your thoughts on the Integrated Arts Framework. Please provide a brief explanation of your selected response.
- a. I have not looked through the framework
 - b. I am not interested in the Integrated Arts Framework
 - c. I find the Integrated Arts Framework too complex, and do not have the inclination to familiarise myself with it
 - d. I understand and appreciate the principles behind the framework, but doubt I will use it
 - e. I find the framework helpful
6. Do you have any further feedback on the Integrated Arts Framework that would be helpful to its refinement?
7. This question asks for your feedback on the Project Gallery. Please briefly explain your selected answer.
- a. I do not understand the point of or see the significance of the Project Gallery
 - b. I think the Project Gallery could be a helpful tool, but do not think our family would use it.
 - c. I think the Project Gallery is a helpful tool, and think our family would use it for inspiration, but we would not upload anything to it.
 - d. I think the Project Gallery is a helpful tool, and think our family will use it for inspiration and upload material to it when we have something to share.
8. Do you have any further feedback on the Project Gallery that would be helpful to its refinement?
9. Has your approach to arts learning changed since joining as a research participant in this project? Please briefly explain your response.
10. In what ways do you think the website could be improved?
11. Do you have any other feedback on the website or on your involvement in this project?

Beta cycle questions

These questions seek to understand how the website is being used.

1. On average, how frequently have you accessed Homeiswheretheartis.com.au?
 - a) Multiple times per week
 - b) Once per week
 - c) Once every fortnight
 - d) Once a month
 - e) Sporadically (please describe)
2. Please describe why you access the website and what information you are looking for?
3. Indicate what elements of the website you have looked at (you may select more than one)
 - a. Forums
 - b. Project Gallery
 - c. Project of the Month
 - d. Integrated Arts Framework
 - e. Arts subject pages (Dance, Drama, Media Arts, Music and Visual Art)
 - f. Specific Arts activity pages (eg. Painting, Stop motion animation, Role Playing etc.)
 - g. I am yet to look at the website
4. Indicate what elements of the website you have found useful (you may select more than one)
 - a) Forums
 - b) Project Gallery
 - c) Project of the Month
 - d) Integrated Arts Framework
 - e) Arts subject pages (Dance, Drama, Media Arts, Music and Visual Art)
 - f) Specific Arts activity pages (eg. Painting, Stop motion animation, Role Playing etc.)

5. Is there other information you would like to see in the website. If so, please describe.

In addition to providing resources and links for Arts learning, this website runs as an online community where ideas and questions can be shared in the Forums, Project Gallery and semi-regular online meet ups. The following questions seek to understand if these aspects of the website are useful, and if they yield greater benefits to home educators' arts engagement.

Online community

6. Have you looked at or contributed to the community aspects, such as forums, online meet ups or Project Gallery?
 - a. Yes
 - b. No
7. If yes, what have you looked at or contributed to, and how beneficial have you found this to your arts teaching practice?
 - a. Forum (Very beneficial, Somewhat beneficial, not beneficial)
 - b. Project Gallery (Very beneficial, Somewhat beneficial, not beneficial)
 - c. Online meet ups (Very beneficial, Somewhat beneficial, not beneficial)
8. If no, what are your thoughts on the community aspects of the website?
 - a. I don't see it as necessary or useful
 - b. I see it as useful, but would not use it myself
 - c. I see it as useful but have not yet had the time to engage
 - d. Other (please specify)
9. Do you have any thoughts or suggestions for the online community aspects of homeiswheretheartis.com.au?

These questions seek to understand how different families prefer to engage with the Arts such that the website can better meet your needs:

Approach

10. Please select the response that best reflects your general approach to arts learning.

- a. We don't intentionally structure arts learning, but provide resources, time and support to allow our children to explore the arts according to their own interests.
- b. We plan arts learning that aligns with our children's interests.
- c. We try to follow the Australian Curriculum: Arts and modify learning to meet our children's interests
- d. We plan arts learning according to the Australian Curriculum: Arts

Arts Resources

11. What types of resources do you access most frequently in stimulating arts engagements?

- a. Tutorial Videos
- b. Printable instructables (step-by-step written instructions)
- c. Pinterest (or similar social sharing sites)
- d. Existing lesson plans
- e. Home school blogs
- f. Other (please describe)

12. When time is limited, do you modify your approach to arts learning?

- a. Yes (please explain the ways you modify your approach to arts learning)
- b. No

Arts Integration

13. What is your opinion of using an integrated approach in the arts? An integrated approach explores Arts learning in conjunction with other subjects instead of exploring the arts as an entirely separate subject. Please explain.

Arts confidence:

14. Which of the following arts subjects do you feel least confident exploring with your children? You may choose more than one.

- a. Dance
- b. Drama
- c. Media Arts

- d. Music
- e. Visual Art

15. Have you sought ideas from homeiswheretheartis.com.au in the Art subjects in which you are less confident?
- a. Yes
 - b. No
16. Briefly describe the approach you use in these subjects in which you feel less confident.

Art techniques

17. Each of the above art forms has its own terminology, techniques, history and skills. Developing an understanding of these can help a student to engage more fully and meaningfully with that art form. How important is the exploration of these foundational aspects in your own arts learning with your children?
- a. This is very important to me
 - b. Somewhat important
 - c. Not important

Demographics

18. How would you describe your predominant approach to home education?
- a. Eclectic
 - b. Structured
 - c. Natural learning/unschooling
 - d. Unit study
 - e. Classical
 - f. Charlotte Mason
 - g. Other (please specify)
19. Do you have any feedback you wish to share or helpful information about the website?

Gamma cycle questions

1. Homeiswheretheartis.com.au has now been updated twice in response to feedback from participants in this project. Please indicate the versions of the website you have accessed. You may select more than one.
 - a. I have not accessed the website
 - b. I have accessed Version 1 (February 2015 – May 2015)
 - c. I have accessed Version 2 (June 2015 – September 2015)
 - d. I have accessed Version 3 (late September 2015 – present)
2. To what extent have you made use of the website?
 - a. I have not used the website to support our creative arts learning
 - b. I have made some use of the website to support our creative arts learning
 - c. I have made considerable use of the website to support our creative arts learning
3. Regardless of the extent of your use of the website, do you feel that the website is /could be helpful in supporting your creative arts teaching and learning with your children?
 - a. Not at all helpful
 - b. Somewhat helpful
 - c. Very helpful
4. Please describe how the website is helpful/unhelpful in supporting your creative arts teaching and learning with your children.
5. It is planned for the website to continue in the future. Please indicate how likely you would be to continue to use it in 2016:
 - a. Not likely
 - b. Somewhat likely
 - c. Very likely
6. The website will remain operational, however some changes to the Project Gallery and forums are being considered through the use of a closed Facebook group and shared BlogSpot (or similar private social sharing platform). Would this change encourage you to be:
 - a. Less likely to share your arts projects and thoughts
 - b. No more or less likely to share your arts projects and thoughts

c. More likely to share your arts projects and thoughts

7. Would this potential change make you:

a. Less likely to look at what other families have shared.

b. No more or less likely to look at what other families have shared.

c. More likely to look at what other families have shared.

8. Please take this opportunity to provide any further information which you think would enhance homeiswheretheartis.com.au for other home educators.

Thank you for your participation in this PhD project which explores arts teaching and learning in Australian home education. Your valuable contribution has been most appreciated!

Appendix G. Semi-structured interview questions

Alpha cycle Interview

- Describe the way you engaged with the arts prior to this project.
- Describe the ways it has changed since engaging in this project.
- In what ways do you see it as improved?
- In what ways do you think it has not helped?
- What do you see as some helpful features of the collaborative arts learning space?
- How do you think they could be further improved?
- What do you see as some features needing improvement?
- What do you perceive as your children's responses to the new approach you are taking?

Beta cycle Interview

- What arts adventures have you been up to since we last spoke?
- What do you think of the newer website?
- Have you used anything in it?
- Revisit what you've done in the arts. Let's look in greater detail at it: what processes were occurring and how do they feel similar/dissimilar to the IAF?
- If we did up a flow chart of your approach to arts learning, what would the steps look like? (Do this for a few projects if needed in order to gain a flexible understanding.
- What are your thoughts on:
 - Arts integration
 - Foundational arts techniques: What strategies do you employ to teach your children arts techniques? What support do you feel you need?
 - Catering to the needs of the child. What strategies have you used to tailor Arts learning to your child's unique interests? What are the features of resources that you find most helpful in this goal?
 - What other resources have you found the most helpful in stimulating arts learning?

Time:

- What are the implications on Arts teaching and learning when you feel time constraints are tight? Do you omit? Focus on easy activities etc?
- In what ways do participants seek resources when they are time-poor? What resource features do they seek?

Online Community:

- Does participation in the website's online community yield greater benefits to an individual's arts engagement?
- Do participants desire access to an online CoP to support their Arts engagement?
- What strategies are recommended to enhance online engagement in community websites?

Gamma cycle Interview

Questions were asked according to the draft design principles:

Situate learning tasks in the family's CoP:

The website has been designed to help families develop learning tasks that align with their child's unique interests, abilities and needs? Have you found this to be the case? What in particular have you found helpful for this? Still lacking?

Facilitate socially-driven, negotiated learning projects between parent and learner:

The website has been designed to facilitate projects that are negotiated between you and your child. Is this important to you? Do you feel that the website has been helpful? What is most helpful/lacking?

Integrate arts learning in open-ended projects:

What was your understanding of/use of integration prior to your participation in this project? How do you view integration now?

Determine specific learning tools required for the task and provide formal instruction regarding these "tools" of the arts:

A problem with integration is that sometimes the arts become less important than the other subject being studied. What is your view of developing arts-specific terminology, skills, and understandings? Do you think this website has helped? What have you found most helpful? What is still needed for you to feel confident in this?

Provide flexible scaffolding for arts learning:

Have you felt that that the website provides adequate guidance in the creative Arts and support that works with your chosen approach to home education?

Provide support for parental knowledge and understanding through meaningful collaboration in an online community of practice:

The website is designed as an online CoP where the community members are intended to support one another, rather than me as the designer being the sole source of information and support. To what extent has the design of the website been successful in supporting this? Have you found this helpful? What would be required for you to engage more fully?

Other questions:

Have you found the intent of the website clear? What would make it clearer?

What were the best changes that occurred during the transition process?

What will you use in the future? Not use?

Appendix H. Ethics approval letter

OFFICE OF RESEARCH
Human Research Ethics Committee
PHONE +61 7 4631 2690 | FAX +61 7 4631 5555
EMAIL ethics@usq.edu.au



4 August 2014

Mrs Katie Burke
160 Boundary Road
Hervey Bay QLD 4655

Dear Katie

The USQ Human Research Ethics Committee has recently reviewed your responses to the conditions placed upon the ethical approval for the project outlined below. Your proposal is now deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* and full ethical approval has been granted.

Approval No.	H14REA139
Project Title	Exploring how Australian home educators teach and engage with the Arts
Approval date	5 August 2014
Expiry date	5 August 2017
HREC Decision	Approved

The standard conditions of this approval are:

- (a) conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC
- (b) advise (email: ethics@usq.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project
- (c) make submission for approval of amendments to the approved project before implementing such changes
- (d) provide a 'progress report' for every year of approval
- (e) provide a 'final report' when the project is complete
- (f) advise in writing if the project has been discontinued.

For (c) to (e) forms are available on the USQ ethics website:
<http://www.usq.edu.au/research/ethicsbio/human>

Appendix I. Ethical consent process

Participant Information Sheet – Expert Consultation



University of Southern Queensland

The University of Southern Queensland

Participant Information Sheet – Expert Consultation

HREC Approval Number: H14REA139

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

Thank you for your consideration in participating in an email interview as part of the above research project.

1. Procedures

Aims of Study

This project seeks to understand: What support can be offered to Australian home educators that will increase their confidence and sense of competence in facilitating a quality arts education? I will be working with a group of home educators to design an online resource for arts learning in home education. Your expertise is considered a valuable addition to understanding how this can be best achieved.

The expected benefits of the research

This study aims to empower home educators to deliver an arts education in their home environment, and to do so in a manner that invites and honours their diverse

experiences. All participants, whether those who currently home educate or who have expertise that can improve the research outcomes, can meaningfully contribute to the collective benefit of home education. Research outcomes will be shared with the wider home education community at the project's completion through the release of the finalised collaborative arts learning space and potential publication.

Data collection

I would like the opportunity to interview you via email in the course of this project in order to gain a stronger understanding of your area of expertise and how it might be applied to this project.

Confidentiality

Privacy and confidentiality of all participants' identities and information is assured throughout this project. If you so choose, information regarding your identity will be removed from data during processing. However, as an expert in your field, it is understood that you may prefer to keep your identity in the data processing and resulting publications.

All data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years. For the purposes of the publication of the study, you may be referred to by a pseudonym if you desire.

Risks to you

As an expert in your field, it is at your discretion as to whether you wish to remain anonymous. If you do wish for this, you will not be identified and the use of a pseudonym will ensure anonymity. You do not have to answer any question you do not wish to.

Possible risks or discomfort and risk mitigation

Your time is valuable and I will undertake to minimise any time imposition upon you. Any in-person/phone interviews will not exceed one hour.

2. Voluntary Participation

Participation is entirely voluntary. **If you do not wish to take part you are not obliged to.** If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information already obtained from you can be removed from the project's data collection at your request. However, ideas that have arisen from your participation and put into action may not be able to be reversed.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with the University of Southern Queensland.

Please notify the researcher if you decide to withdraw from this project.

Should you have any queries regarding the progress or conduct of this research, you can contact me:

Katie Burke
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 910
Hervey Bay, Qld, 4655.

Ph: 0403 525 791

Email: katie.burke@usq.edu.au

Or my supervisors

Associate Professor Margaret Baguley
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 4196,
Springfield Central QLD 4300
Contact phone: (07) 3470 4341
Contact email: baguley@usq.edu.au

Dr. David Cleaver
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 4196,
Springfield Central QLD 4300

Contact Phone: (07) 3470 4344

Contact Email: david.cleaver@usq.edu.au

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Expert Consultation Consent Form



University of Southern Queensland

The University of Southern Queensland

Consent Form – Expert Consultation

HREC Approval Number: **H14REA139**

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

- I have read the *Participant Information Sheet – Expert Consultation* and the nature and purpose of the research project has been explained to me. I understand and agree to take part.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I confirm that I am over 18 years of age.
- I understand that while information gained during the study may be published, I can choose not to be identified in connection with the research data.
- I understand that all data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years after the completion of the study. Consent forms will be retained for a minimum of 15 years.

If you agree to the above terms, please complete the following and forward to katie.burke@usq.edu.au

Name:	
Signature:	

Anonymity:	<input type="checkbox"/> I wish to remain anonymous. <input type="checkbox"/> I do not wish to remain anonymous.

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Participant Information Sheet – Internet survey

The following participant information appeared on the first page of the Phase One survey in Survey Monkey:

This brief survey is part of a research study titled “Exploring how Australian home educators teach and engage with the Arts”, conducted by Katie Burke from the University of Southern Queensland, who was herself a home educator for 8 years. The purpose of the project is to work with home educators to collaboratively generate a resource that will assist parents in providing a quality arts education.

This survey will look at your experiences in teaching your children about the arts. You will be asked about areas you find positive and challenging in arts education and about experiences relating to your sense of confidence and competence. In the context of this research, “the arts” refers to Music, Media Arts, Visual Art, Drama and Dance.

By completing this survey, you are agreeing that the information you provide may be used in the above research project. The information you provide will be de-identified and your identity will remain anonymous. Once submitted, data will be unable to be withdrawn from this survey owing to its anonymous nature. Your participation in this survey is completely voluntary and you do not have to answer questions if you choose not to.

If you wish to go into the draw for the \$100 Booktopia voucher, you will need to provide contact details in the second-last question. All contact information given for entry into the draw will be strictly confidential and will only be used to alert the winner of their prize. If you wish to remain anonymous, you should not enter the draw.

Katie Burke
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 910
Hervey Bay, Qld, 4655.

Email: katie.burke@usq.edu.au

Participant Information Sheet – Focus Group



University of Southern Queensland

The University of Southern Queensland

Focus Group Participant Information Sheet

HREC Approval Number: H14REA139

Full Project Title: Exploring how Australian home educators teach and engage with the Arts

1. Procedures

Aims of Study

This focus group meeting is part of a larger project that seeks to understand: What support can be offered to Australian home educators that will increase their confidence and sense of competence in facilitating a quality arts education? I will be working with a group of home educators to design an online resource for arts learning in home education. Participating home educators will have the opportunity to trial this resource with their own children and provide ongoing feedback for its improvement. At the completion of the project, it is hoped that the resource design will meet the needs of home educators, as well as the hallmarks of a quality arts education.

The aim of this specific focus group is to find out how you feel about teaching the arts to your children. You will be asked about how you engage with the arts, the elements you feel you are doing well, the areas that you find challenging, and will have the opportunity to engage with others in the group to see how different families approach these experiences. You will also be asked for ideas as to what you feel is lacking with art education support for home educators.

The expected benefits of the research

This overall study aims to empower home educators to deliver an arts education in their home environment, and to do so in a manner that invites and honours the diverse experiences of Australian home educators. Our wisdom in different areas of strength can be shared; difficulties can be discussed, and potential solutions generated. All participants can meaningfully contribute to their personal, and collective, benefit.

Data collection

The focus group meeting will be conducted at (H14REA139 – anticipate a public venue such as a local park or coffee shop) and should take no longer than one hour. Our conversation will be audio recorded and then later transcribed by myself for analysis to ensure the accuracy of the information that has been provided.

Confidentiality

Privacy and confidentiality of all participants' identities and information is assured throughout this project. Your contributions to the meeting will be kept confidential, and de-identified, meaning that any information regarding your identity will be removed from the data. You may choose your own pseudonym.

All data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years.

Risks to you

You will not be identified in any publication arising from the focus group, and the use of a pseudonym will ensure anonymity. You do not have to answer any question you do not wish to. All data collected will be de-identified for analysis by the researcher. All participants are asked to keep information that has been shared during the focus group session confidential, however this is unable to be enforced by the researcher.

Possible risks or discomfort and risk mitigation

It is a minor possibility that disagreement between participants may arise. These will be viewed and treated positively in a manner that values the learning that can arise from such points of difference, and this process will be managed via my role as the

project leader. In the unlikely event that distress occurs, you may cease your involvement in the study without prejudice. Given that the researcher cannot guarantee that all participants will uphold the confidentiality of information shared during the session, participants should be mindful as to the level of information they share during this time.

2. Voluntary Participation

Participation is entirely voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. However, please be aware that it will not be possible to remove your information from the focus group interview.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with the University of Southern Queensland.

Please notify the researcher if you decide to withdraw from this project.

Should you have any queries regarding the progress or conduct of this research, you can contact me:

Katie Burke
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 910
Hervey Bay, Qld, 4655.

Email: katie.burke@usq.edu.au

Or my supervisors

Associate Professor Margaret Baguley
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Contact email: baguley@usq.edu.au

Dr. David Cleaver
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 4196,
Springfield Central QLD 4300

Contact Phone: (07) 3470 4344
Contact Email: david.cleaver@usq.edu.au

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Focus Group Consent Form



University of Southern Queensland

The University of Southern Queensland

Participant Consent – Focus Group

HREC Approval Number: H14REA139

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.

- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future, however I am also aware that information I have provided during the focus group interview cannot be removed.
- I confirm that I am over 18 years of age.
- I understand that while information gained during the study may be published, I will not be identified in connection with the research data.
- I understand that all data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years after the completion of the study. Consent forms will be retained for a minimum of 15 years. Only the researcher and her supervisor will have access to these files.

Name:	
Preferred pseudonym:	
Signature:	

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Participant Information Sheet – Interview and Observations



University of Southern Queensland

The University of Southern Queensland

Participant Information Sheet – Interviews and Observation (Adult participants)

HREC Approval Number: H14REA139

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

Thank you for your consideration in participating in additional interviews and a session of observation for the above project. The times for these sessions will be arranged for mutually convenient times.

1. Procedures

The aims and expected benefits of the overall research project are outlined in your initial participant information sheet. Additional aims and benefits of the interviews and observation are outlined below.

Aims

In addition to using the data gained through participants' involvement in the internet surveys and website associated with this project, deeper understandings are sought from some families as to how they are using the collaborative arts learning space. You will be asked to share your thoughts and feelings about the design of the collaborative arts learning space, what is working or not working for you, of issues you see as requiring improvement, and most of all, reasons behind your thoughts and feelings. During the final interview, your children's opinions will also be sought on their perceptions of their arts education using the resource provided through this research.

A maximum of two observation sessions will be conducted in order to gain an appreciation of how different families are implementing the collaborative arts learning space. These will be held in the second half of the year in order to allow families to gain confidence with the resource, and to develop their own unique approach to arts learning, which does not necessarily have to follow the resource closely.

The expected benefits of the research

The interviews and observation/s will provide rich understandings about the uniqueness of individual homes and approaches to arts learning. Importantly, these will provide insight into the reasons behind why certain elements of the collaborative arts learning space might be working or not working. It is hoped that gaining such detailed insights will honour the expertise of home educating parents and lead to greater improvements to the collaborative arts learning space such that it meets the needs of families throughout Australia.

Data collection

I plan to conduct approximately three interviews with you through the course of the year, each lasting about an hour. It is possible that interviews that are not conducted in tandem with an observation session may be conducted via phone or Skype if distance to travel is significant. All interviews will be audio recorded for analysis. At your final interview, I would also like the opportunity to include your children in order to hear their thoughts and perspectives on the collaborative arts learning space. I also plan to conduct observations immediately prior to the latter interviews (lasting no longer than three hours), during which you conduct your normal arts education with your children. I will film some parts, photograph some moments, and take notes during this time to assist the accuracy of my analysis. The intent of this observation will be to understand how parents are using the resource, not to judge the quality of their arts education with their children. The photographs will be shared with you and may also be used in future publications as visual documentation of the exciting projects that families are engaging in, providing helpful and inspiring examples so that other readers may better understand the project and its potential outcomes. All photographs taken will be shown to you for your approval whilst I am with you and I will immediately delete any images you do not wish me to use in the future.

Confidentiality

Privacy and confidentiality of your name and location, and the name/location of your children is assured throughout this project. Any information regarding your name/location will be removed from data during processing. For the purposes of the publication of the study, you will be referred to by a pseudonym. Any photographs taken will have names/locations removed, and I will seek your permission to use selected images in future publications. If you so choose, you may refuse to allow photos to be taken in order to assure complete confidentiality of both your identity and that of your children.

All data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years.

Risks to you

You or your children will not be identified and the use of a pseudonym will ensure anonymity. Family locations are also de-identified in the study. You do not have to answer any question you do not wish to. All data collected will be de-identified for analysis by the researcher.

Your time is valuable, and therefore, I will make all effort to minimise my time imposition on your family, keeping interviews to an hour per interview and the observation no longer than 3 hours.

Possible risks or discomfort and risk mitigation

You may choose to have the interviews and observation at any location that is suitable to you and your children, including your home. If you feel uncomfortable at any point, you may ask to cease the interview/observation and for me to leave, without pressure for any further interviews. Please feel free to remain open and honest about your involvement in the project; it is very important to me that the research is genuinely beneficial to home educators, and not an annoyance.

At no point will I be left alone with your children. If your children are unhappy with the interview/observation process, they may also ask to refrain from participating, and I will accept their right to do so without any coercion for further participation.

1. Voluntary Participation

Participation is entirely voluntary. **If you do not wish to take part you are not obliged to.** If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Given that I will be working with participants collaboratively, progressively incorporating their ideas into the development of the collaborative arts learning space trial, withdrawal of interview and observation data is unable to be guaranteed. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with the University of Southern Queensland.

Please notify the researcher if you decide to withdraw from this project.

Should you have any queries regarding the progress or conduct of this research, you can contact me:

Katie Burke
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 910
Hervey Bay, Qld, 4655.

Email: katie.burke@usq.edu.au

Or my supervisors

Associate Professor Margaret Baguley
Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 4196,
Springfield Central QLD 4300

Contact phone: (07) 3470 4341

Contact email: baguley@usq.edu.au

Dr. David Cleaver

Faculty of Business, Education, Law and Arts

University of Southern Queensland

PO Box 4196,

Springfield Central QLD 4300

Contact Phone: (07) 3470 4344

Contact Email: david.cleaver@usq.edu.au

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Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Interview and Observation Consent Form for Adults



University of Southern Queensland

The University of Southern Queensland

Interview and Observation Consent

HREC Approval Number: H14REA139

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

I have read the *Participant Information Sheet – Interviews and Observation* and the nature and purpose of this element of the research project has been explained to me. I understand and agree to take part.

- I understand the purpose of the research project, my involvement in it, and my children's involvement.
- I have explained the research to my children and have sought their consent (without coercion) to be observed, filmed and photographed for the purposes of the research.
- I understand that I or my children may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I confirm that I am over 18 years of age.
- I understand that while information gained during the study may be published, I or my children will not be identified in connection with the research data.
- I understand that all data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years

after the completion of the study. Consent forms will be retained for a minimum of 15 years.

Name **of**
participant.....

Preferred **pseudonym**
.....

(This should be the pseudonym you have been using throughout the project)

Permission for Children

I do/do not give permission for photographs to be taken of

- **My children participating in arts activities**
- **My children's artwork**

Signed.....**Date**.....

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer

Office of Research and Higher Degrees

University of Southern Queensland

West Street, Toowoomba 4350

Ph: +61 7 4631 2690

Email: ethics@usq.edu.au

Participant Information Sheet - Interview and Observation (Children)



University of Southern Queensland

The University of Southern Queensland

Participant Information Sheet – Interview and Observation (children and young people)

HREC Approval Number: H14REA139

Full Project Title: *Exploring how Australian home educators teach and engage with the Arts*

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

Thank you for agreeing to talk to me about your arts learning, and agreeing to let me watch you during an arts lesson. This research is part of a project in which I am working with home educators to create a helpful website with exciting learning in Music, Media Arts, Drama, Dance and the Visual Arts. Your thoughts on your own experiences with your family's use of this website will help me to understand how we can make this website even better.

What you will need to do

I would like to watch you during a normal session of learning that includes learning in one or more areas of the arts (Music, Media Arts, Drama, Dance or Visual Art). During this time, I'll video some parts and take notes of what is happening so I can remember it clearly afterwards. I would also like to take some photographs of your learning, or of your artworks. These photographs may be used in future publications to show the exciting projects that families are engaging in. All photographs taken will be shown to you for your approval whilst I am with you and I will immediately delete any images you do not wish me to use in the future.

After the observation, I'd like to chat with you and your parent or caregiver about your thoughts and feelings about the design of the arts website that you have been using. We'll talk about what is working or not working for you, and you will have the opportunity to share ideas for how it could be improved.

Voluntary Participation

If you do not wish to take part you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

How will my information be used?

During our time together, I will write notes, record video footage, and record our interview. This information will be kept private and only used for my analysis. Photographs taken on the day may be shared in related publications if you agree to their use, and will not include your name. All of your information will be de-identified in the evaluation of the project and any subsequent publications about the project.

Yours sincerely,

Katie Burke

Faculty of Business, Education, Law and Arts
University of Southern Queensland
PO Box 910
Hervey Bay, Qld, 4655.

Email: katie.burke@usq.edu.au

Interview and Observation Consent Form for Children



University of Southern Queensland

The University of Southern Queensland

Consent – Interview and Observation (young people and children)

HREC Approval Number: H14REA139

Full Project Title: ***Exploring how Australian home educators teach and engage with the Arts***

Principal Researcher: Katie Burke

Other Researcher(s): AP Margaret Baguley and Dr. David Cleaver

The *Participant Information Sheet – Interviews and Observation (young people and children)* has been read/read to me and explained to me. I agree to take part in this research.

- I understand the purpose of the research project and my involvement in it.
- I agree to participate in an interview with my parent/s.
- I agree to be observed while learning about the Arts.
- I understand that I may withdraw from the research project at any stage.
- I understand that I will not be identified in connection with the research data.
- I do/do not give permission for photos to be taken of
 - Me
 - My artwork

My Name:

Appendix J. Participant recruitment according to phase

Data collected/ Number of participants	Selection procedure
Phase One - Anonymous/ Coded Internet Survey 192 participants	An open invitation to Australian home educators was sent out via my existing contacts and online sites dedicated to home education. Given that a broad scale understanding of the issues pertaining to arts education in home education was sought, approximately 200 responses were sought. All survey participants were informed of the upcoming arts website for home educators, and invited to contact me as the researcher if they were interested in utilising this website and participating in the research project.
Phase One – focus group 2 participants	Focus group participants were sought from within the local home educating community. A target population of seven participants was desired to: <ul style="list-style-type: none"> • permit a range of perspectives; and • ensure a small-enough group such that all participants feel comfortable in communicating their perspectives. Four families responded, however only two families presented on the day, with one family forgetting the appointment, and another having to cancel at the last minute due to unforeseen circumstances.
Phase Two – expert consultation 3 participants	Prior to releasing the website to participating home educators, the prototype website was subject to evaluation and feedback from experts in relevant fields of online learning, home education, and arts education. Participation requests were sent via email, and participants selected for their proven area of expertise.
Phase Three – design solution participation Approximately 80 participants	Phase One survey participants who indicated their interest in participating in the arts website and who completed informed consent were permitted to access the website. A minimum of 30 participants was desired in order to ensure a variety of perspectives and experiences were shared in the website, however numbers of enrolled participants reached a pleasing number of approximately 80 for each website iteration, with numbers fluctuating slightly due to some participants requesting to withdraw due to time constraints, and new participants joining later in the project.
Phase Three – interviews 5 participants, 3 interviews each	All participants using the website were invited to express their interest in participating in a series of three interviews. Of those who volunteered, final selection of approximately five interview/observation participants was based upon a mix of criteria, including: <ul style="list-style-type: none"> • Contributions already made to the website: Those with strong involvement were favoured for the insights they

	<p>could bring to the research regarding the functioning of the website; and</p> <ul style="list-style-type: none"> • Location: potential participants in accessible locations were favoured over those in less accessible locations. Skype interviews were conducted with one participant due to her remote location, but very strong contributions to the website.
Phase Three – observations 4	Permission was sought from interview participants to observe one arts learning session in action. All participants who were interviewed in person agreed. The Skype interview participant declined.

Appendix K. Ethical consent process for website participants

Participant Information sheet and consent pages – website participants



SIGN UP

PARTICIPANT INFORMATION:

Click here to sign up

This website is being developed as part of a doctoral research project called: Exploring how Australian home educators teach and engage with the Arts". It is conducted by former home educator, Katie Burke, through the University of Southern Queensland. Most pages are restricted to members who agree to the informed consent process. This outlines the maintenance of confidentiality and anonymity, ethical guidelines for online behaviour, and the ways data will be collected, used, and protected. [Detailed participant information](#) and a [code for ethical behaviour](#) can be read below.



DO YOU HAVE QUESTIONS BEFORE SIGNING UP?

If you have any questions or concerns that you would like to address prior to signing up, please do not hesitate to get in [CONTACT](#).

Why sign up?

Website members will gain access to a number of important (and hopefully exciting!) opportunities:

- The online gallery is the exciting centrepiece of this site, in which members can upload videos, pictures, audio files and descriptions of their own arts adventures, which in turn will provide inspiration to other families for exciting ways to engage with the arts.
- The forum space allows members to share questions and knowledge related to your children's (and your!) arts learning, or to seek assistance with any technical issues you may have with the website.
- Give ongoing feedback on the website, its content, how helpful you find it in teaching your children about the arts in your home, or how you would like to see the site improved.

Detailed Participant Information

Aims of Study

The project seeks to understand what support can be offered to Australian home educators that will increase their confidence and sense of competence in facilitating a quality arts education. Through this project I will be working with a group of home educators to design an online resource and collaborative learning space for arts learning in home education. As a community of home educators, your input will shape the direction and nature of this resource, which you will also be able to use with your own children in exploring the arts. Your feedback will

also provide direction for this resource's improvement. At the completion of the project, it is hoped that the collaborative learning space design will provide home educators with a practical and useful resource into which they have provided valuable input.

The expected benefits of the research

This study aims to further enhance the confidence of home educators to deliver arts education in their home environment, and to do so in a manner that invites and honours their diverse experiences. It is important during this project that different perspectives can be shared, difficulties assessed and potential solutions generated. All participants can meaningfully contribute to their personal, and collective, benefit of home educating.

Data collection

The research will be conducted via this private, password-protected website hosted by the University of Southern Queensland and moderated by myself as the researcher. Data to help guide the research will be collected throughout your interactions with this software including:

- Forum postings
- Website log data
- Anonymous surveys: 3-4 short surveys will be given throughout the course of the project asking for your feedback on elements that you like or dislike about the arts website, as well as opportunity for suggestions for improvement. These should take between 5-15 minutes to complete. These surveys will be conducted using Survey Monkey which is based in the United States of America. Information you provide on the surveys will be transferred to Survey Monkey's server in the United States of America. By completing these surveys, you agree to this transfer. Once the survey has been completed it will not be possible to remove your data due to the anonymity of the survey.
- Personal communication: Any email communication that you engage in with the researcher may be used as data in the project if it is deemed helpful to the aim of the project.

A small number of families will be approached for additional interviews and a three hour observation period later in the project. An email will be sent to all participants to ask if they would like to participate in this stage of the project, however this is completely voluntary. If you are interested in being one of these interview participants, please respond to this email.

This project is anticipated to be conducted over the course of the school year in 2015. It is hoped that you find involvement in it positive and helpful in supporting and informing your teaching of the arts.

Confidentiality

The privacy and confidentiality of all participants' identities and information is assured throughout this project. You are asked to use a pseudonym of your choosing during forum postings. Your data will be de-identified after it has been analysed. Any photo you choose to upload for your profile or folio can be seen by any website member. Please keep this in mind before uploading one that you may not wish others to see, especially if it includes your children or other people. Those wishing to maintain anonymity should use an avatar or image that keeps their identity private. Date of birth for children is only collected for statistics about website usage and to better understand member demographics. No personally identifiable information will be collected or used in conjunction with these dates.

All data pertaining to this research will be kept in a locked cabinet and password-protected computer for a minimum period of five (5) years after the completion of the study. For the purposes of the publication of the study, you will be referred to by a pseudonym.

Risks to you

You will not be identified and the use of a pseudonym will ensure anonymity. Family locations are also de-identified in the study. You do not have to answer any question you do not wish to. Only I will know the identity of participants in the study unless you choose to reveal it to fellow participants. Anything that you discuss during this time will be confidential. Any publications which arise from this research will de-identify the participants.

There is the minor risk of differences of opinion arising between participants. These will be viewed and treated positively in a manner that values the learning that can arise from such points of difference, and this process will be managed via my role as the project leader. Your participation in this research will require your agreement to abide by a code of ethical conduct for online behaviour, thus minimising the possibility of distress or discomfort to you as a participant. In the unlikely event that distress occurs, you may cease your involvement in the study without stigma or repercussions.

Voluntary Participation

Participation is entirely voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information already obtained from you can be removed from the project's data collection at your request. However, responses by other participants to any forum postings you have contributed cannot be removed. Ideas that have arisen from your participation and put into action may also not be able to be deleted.

Your decision whether to take part or not, or to take part and then withdraw, will not affect your relationship with the University of Southern Queensland.

Please notify the researcher if you decide to withdraw from this project.

Informed consent for website participants



Informed Consent

- I have read the Participant Information page and the nature and purpose of the research project has been explained to me. I understand and agree to take part.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I confirm that I am over 18 years of age.
- I understand that while information gained during the study may be published, I will not be identified in connection with the research data.
- I understand that all data pertaining to this research will be kept in a locked cabinet or password-protected computer for a minimum period of five (5) years after the completion of the study. Consent forms will be retained for a minimum of 15 years. Only the researcher and her supervisors will have access to these files.
- I understand that I am required to abide by a code of conduct in my online interactions with other participants, which I have read and agree to abide by.
- I understand that by requesting access to the research website, I am agreeing to the above points.

[Click here to sign up](#)

Appendix L. Evaluation of proposed changes - Alpha cycle

EVALUATION OF PROPOSED CHANGES TO ALPHA WEBSITE FUNCTIONALITY

Proposed change to website functionality	Approved	Justification
Correctly embed website analytics to track site traffic;	Yes	Viable, legitimate and efficient. A necessary data-collection tool to ascertain site traffic and identify more accurately how the website is being used.
Enable users to stay logged in after leaving the website;	No	Request not legitimate. This does not align with the project's ethical consent, which allows only registered users to gain access to the site. A device that remains logged in may allow access to the site by a non-participant and thus breach the project's confidentiality.
Move Project Gallery comments function to each Project folder, not on each artwork;	Yes	Viable, and legitimate. This change will make the comments feature more accessible and enable comments on a whole project upload, not just on individual artworks. Whilst a relatively costly change, it is considered to be a worthy financial investment to enhance the user-friendliness of the Project Gallery.
Enable participant editing to their own Project Gallery uploads;	Yes	Viable, legitimate and efficient. Gives participants the option to add further artworks and information to their Project Gallery uploads or to make updates to information or tagging.
Allow administrator editing in uploads to Project Gallery;	Yes	Viable, legitimate and efficient. Enables further helpful information to be added to Project Gallery uploads to increase their usefulness.
Create folders in Project Gallery according to Subject (ie	No	Not efficient. The existing search function allows this process to occur by searching via subject.

History, Geography etc);		
Require administrator approval for Project Gallery Uploads in order to facilitate administrator editing for project format consistency;	No	Not viable or legitimate. Administrator approval does not align with project focus on a collaborative atmosphere and increases the researcher/researched binary (see Hawkins, 2011).
Allow attachments in forums;	No	Legitimate and viable. Not efficient. This enhances the website’s user-friendliness; however, the financial cost of developing this functionality made it cost-prohibitive when balanced with the potential outcomes.
Provide a <i>print page</i> button;	Partial	Legitimate. Not viable or efficient. A “print page” functionality was not a feature offered through the Wix website builder, meaning that it was not an easy change to implement. However, a compromise was considered: a simple PDF of the steps of the IAF could be embedded and downloaded on the IAF pages.
Generate a message in the daily feed regarding new uploads to the Project Gallery;	Yes	Viable, legitimate and efficient. This simple change would allow all participants to receive alerts regarding new uploads to the Project Gallery through the daily feed.
Provide an easier function to upload projects;	Yes	Viable, legitimate and efficient. This simple change will make uploading projects simpler and more visible.
Present projects according to levels of complexity or maturity; and	No	Not viable, not efficient. This change would require a time-consuming restructure of the Project Gallery Page, which, when weighed against potential outcomes, was not considered efficient.

Enhance menus and quick navigation within site.	Yes	Viable, legitimate and efficient. Menu updates would be necessitated by a restructuring of some website features, and would be approached with a desire to increase quick navigation in this process.
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EVALUATION OF UPDATES TO THE ALPHA WEBSITE RESOURCES

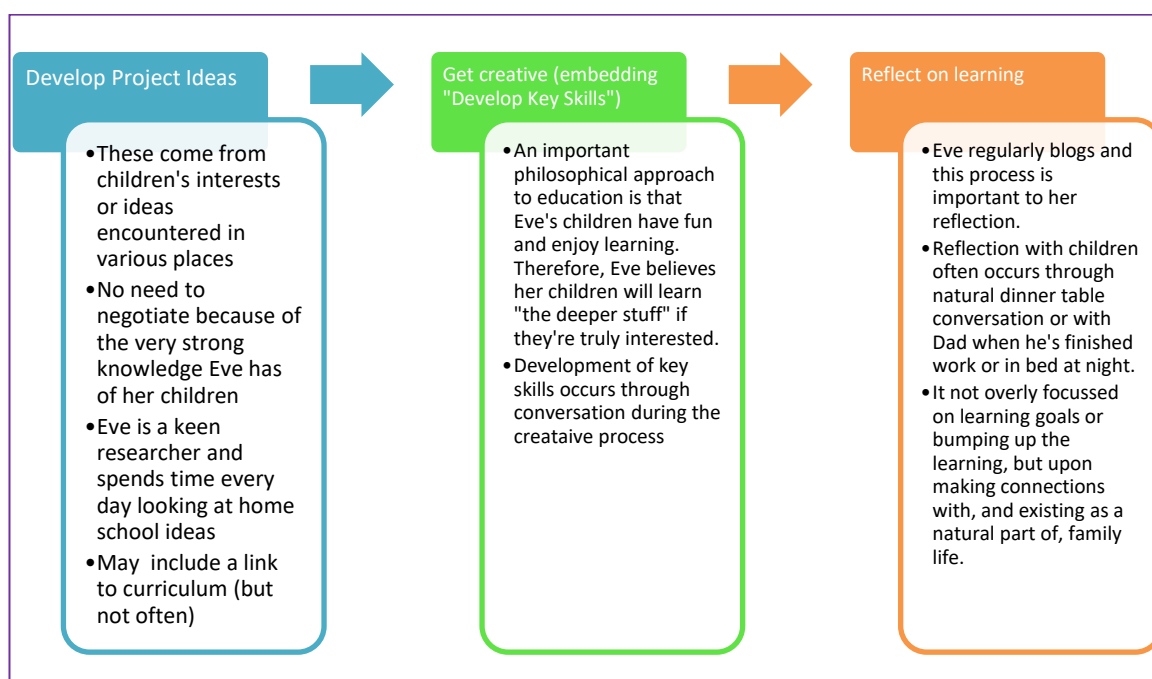
Proposed change or update to website resources:	Approved	Justification
Restructure the website such that the focus is no longer on the IAF as the central approach to arts learning;	Yes	Viable, legitimate and efficient. This represents the largest change to the website, but one that potentially opens the site up to a wider range of users who may not wish to integrate the art subjects, or who are seeking access to arts activities. Access to individual art subject pages and associated learning activities will be elevated to the main menu. This menu will retain the IAF, but present it as one strategy for arts engagement, instead of the former approach which presented the IAF as the predominant strategy.
Remove the Library page and redistribute the library's resources across relevant art subject pages;	Yes	Viable, legitimate and efficient. The library was the least-used element of the website. Embedding resources in context with the relevant art-form pages is a relatively easy task that will situate resources in context and make them more likely to be accessed.
Move suggestions for integration to a more useful and logical spot and hyperlink to gallery if applicable;	Yes	Viable, legitimate and efficient. Suggestions for integration will be re-written to accompany individual arts activities, showing specific suggestions for how each arts activity may be integrated with other learning areas, and making the suggestions for integration more likely to be user-friendly.
Provide more examples of arts learning in action in both the website arts resources and Project Gallery;	Partial	Viable and legitimate, but not efficient. Examples of learning activities in action, especially video examples, are time-consuming to create, and current data shows that not all examples have been accessed. Examples will be progressively created and uploaded to the site, but only following the successful completion of other, more important, changes to the site.

Refine the IAF language to make it more conversational;	Yes	Viable, legitimate and efficient. This simple change has the potential to make the IAF more approachable through language that describes the steps and makes them appear less “academic”.
Simplify the IAF pages by breaking the text into brief statements and a “read more” function;	Yes	Viable, legitimate and efficient. This is a simple change that will reduce the clutter of words on the page, simplify the IAF approach, but still provide further detail for those who wish to understand it in depth.
Provide alternatives to the IAF project template which documents learning projects using the steps of the IAF. Consider another means of recording learning;	Yes	Viable, legitimate and efficient. An alternative template that is more open to the variety of ways that home educators have approached arts learning in their home and is likely to encourage more participants to share their learning, even if they have not used the IAF steps.
Reduce written content where possible by using meaningful graphics and images that summarise and exemplify concepts; and	Yes	Viable, legitimate and efficient. Reducing wordiness and using images is a simple change that will make the website less intimidating, and more visually exciting, which should encourage participants to explore in greater depth, instead of “glossing over” too many written words.
Provide prescriptive, curriculum-linked arts activities for printable downloading.	No	Not viable, legitimate, or efficient. Prescriptive, curriculum-linked resources for all five art subjects across all year levels will create an untenable workload in the given timeframe. Further, this approach does not align with the provision of arts learning that is flexible and emanating from the family’s CoP. However, given that participants have acknowledged that prescriptive resources have provided helpful scaffolding when confidence is lacking, this strategy may be considered for future design iterations once further research is conducted.

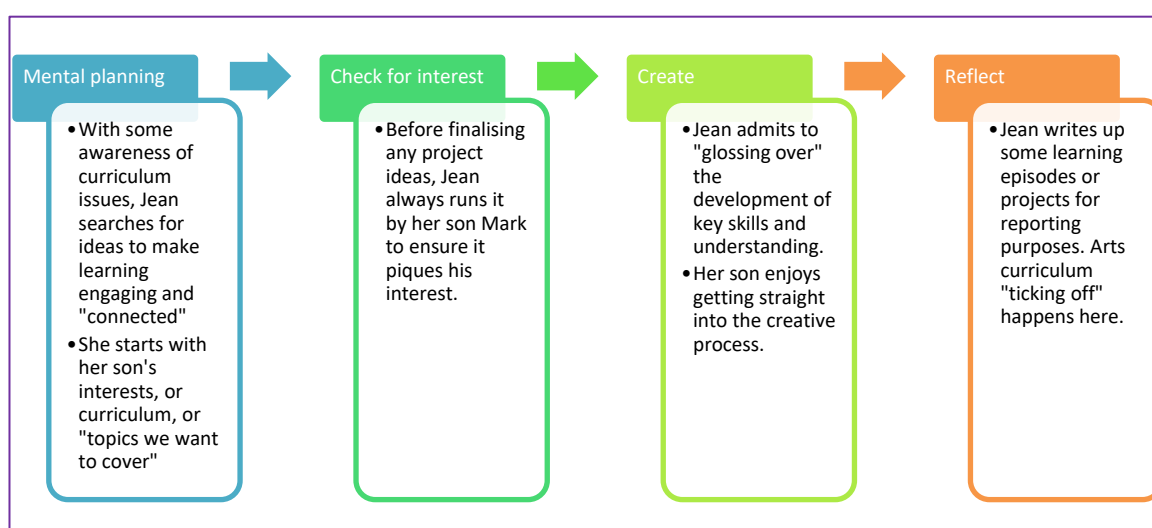
Appendix M. Processual approaches to arts learning in individual contexts

In consultation with participants in interview and via observations of an arts learning episode in action, the following ‘maps’ of participants’ processual approaches to the teaching of the Arts in their individual contexts were created.

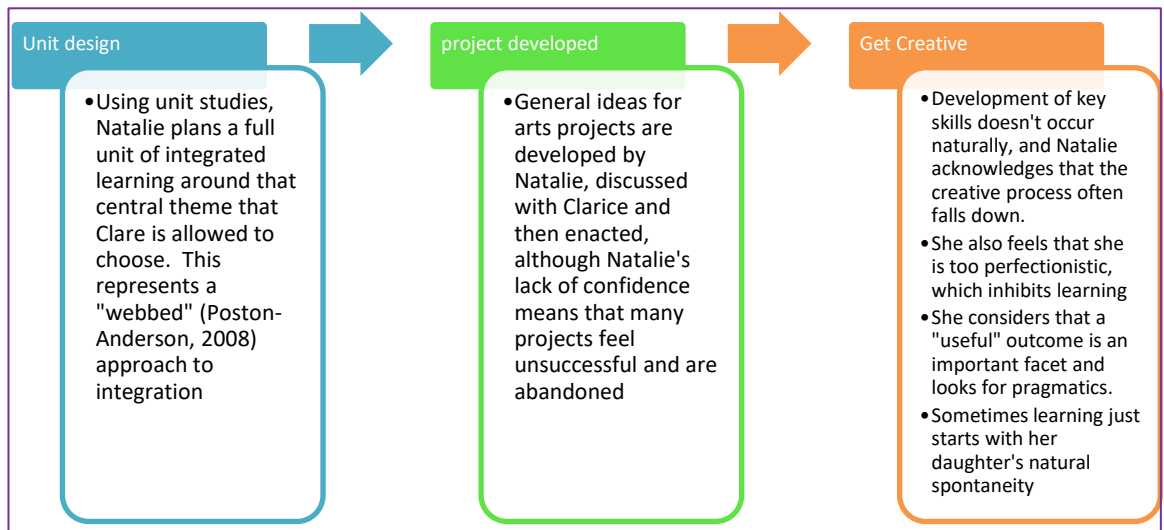
Eve



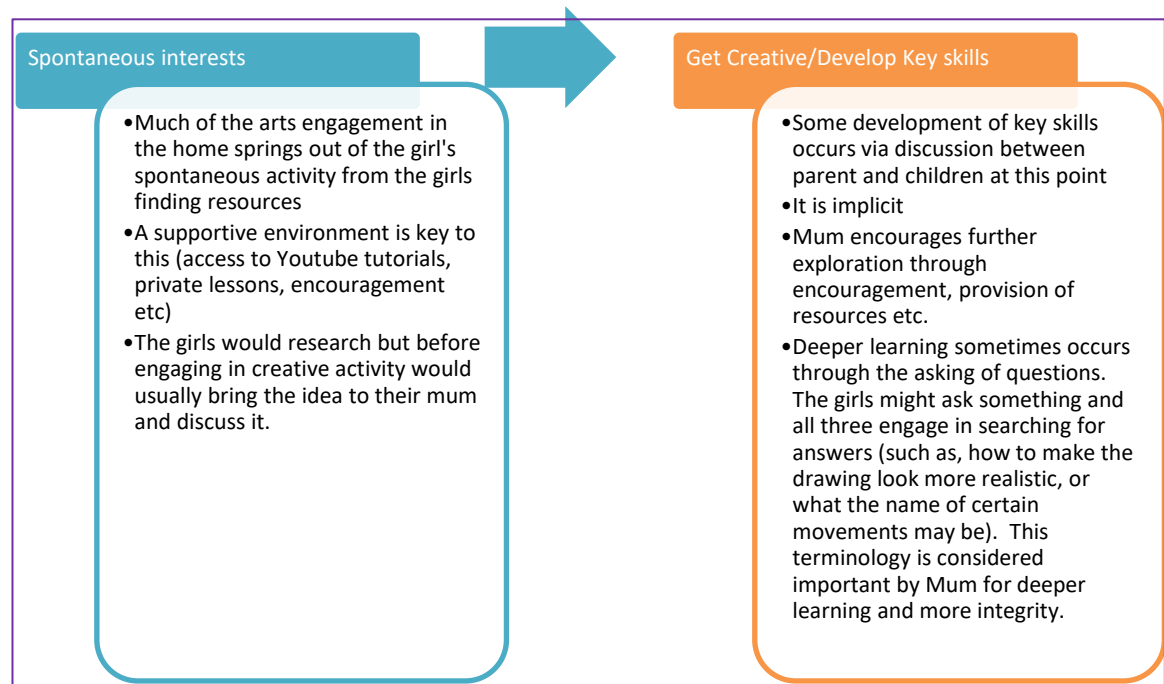
Jean



Natalie



Twilight



Grace

