

Research Informing the Practice of Museum Educators

**Diverse Audiences, Challenging Topics,
and Reflective Praxis**

David Anderson, Alex de Cosson
and Lisa McIntosh (Eds.)



SensePublishers

Research Informing the Practice of Museum Educators

Research Informing the Practice of Museum Educators

Diverse Audiences, Challenging Topics, and Reflective Praxis

Edited by

David Anderson, Alex de Cosson and Lisa McIntosh

University of British Columbia, Canada



SENSE PUBLISHERS
ROTTERDAM/BOSTON/TAIPEI

A C.I.P. record for this book is available from the Library of Congress.

ISBN: 978-94-6300-236-3 (paperback)

ISBN: 978-94-6300-237-0 (hardback)

ISBN: 978-94-6300-238-7 (e-book)

Published by: Sense Publishers,
P.O. Box 21858,
3001 AW Rotterdam,
The Netherlands
<https://www.sensepublishers.com/>

All chapters in this book have undergone peer review.

Printed on acid-free paper

All Rights Reserved © 2015 Sense Publishers

No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

TABLE OF CONTENTS

Foreword: Research Informing the Practice of Museum Educators: Diverse Audiences, Challenging Topics, and Reflective Praxis <i>David Anderson, Alex de Cosson and Lisa McIntosh</i>	vii
Acknowledgments	xiii
Section 1: Introduction: Museum Educators Supporting Diverse Audiences: Parents, Teenagers and Family Groups <i>David Anderson</i>	
1. Home Educators' Views of Museums: Challenges and Opportunities of Supporting Non-Traditional Learning <i>Stephanie L. Chong</i>	5
2. On Our Own: Family Experiences in Art Museums Outside of Facilitated Programming <i>Pilar Wong</i>	23
3. Parents' Perspectives about Exhibit Label Content in a Science Museum <i>Jennifer A. Hall</i>	43
4. Sparks of Learning: Insights from an After-School Science Museum Program for Teenagers <i>Marina Mehai</i>	57
Section 2: Introduction: Museum Educators Practice: Challenging Topics and Unique Audiences <i>Lisa McIntosh</i>	
5. Navigating Sensitive Topics with Children: An Inquiry of Museum Educators Facilitating Conversations about Death with Children <i>Lorenda Calvert</i>	81
6. Children's Attitudes toward Specimens at the Beaty Biodiversity Museum <i>Xiaomin Zhang</i>	97
7. Museums and Marginalized Historical Narratives: Learning the Truth about Indian Residential Schools at the UBC Museum of Anthropology <i>Erica Gibbons</i>	115

TABLE OF CONTENTS

8. Training Scientists to Communicate Science to the Public in a Science Museum Setting <i>Wei Hu</i>	131
9. Identification of Potential Methods of Professional Support for Museum Educators Working with Young Children with Cognitive Disabilities in Museums <i>Mary Ashley Masterson</i>	147
Section 3: Introduction: Museum Educators' Praxis: Learning through Ones' Own Reflexive Research <i>Alex de Cosson</i>	
10. Representing Other: Finding Reflections of Myself from a Space In-Between a Garden and a Museum <i>Kendra Fehr</i>	165
11. Using Informal Learning Spaces to Increase Meaning-Making: Museum Visits with Young Adults <i>Karla Smedley</i>	183
12. Embodied Tensions: Digging into Agriculture at the BC Farm Museum <i>Kate Petrusa</i>	201
13. Ecologies of Youth Art Apprenticeship: A Case Study of the Burnaby Art Gallery's Artist Apprenticeship Project <i>Talya Fuchs</i>	215
14. Creating Meaningful Experiences in Art Museums: A Study of Museum Educators' Perceptions of Meaningful Engagement with Works of Art <i>Nathalie Sienkiewicz</i>	231
Contributors	247
Index	251

DAVID ANDERSON, ALEX DE COSSON AND LISA MCINTOSH

FOREWORD

Research Informing the Practice of Museum Educators: Diverse Audiences, Challenging Topics, and Reflective Praxis

Museums are institutions of both education and learning in service of society, that is, they are sites where educational experiences are designed and facilitated, and also places where visitors learn in broad and diverse ways. As such, the role of public education in museums today is highly important, if not at the centre of museum activity (G. Hein, 2005, 2006). As museums contemplate the growing significance of their educational roles and mandate within a changing society, so too they are increasingly in need of information about the audiences they serve and their own professional practice as they strive to achieve their educational missions in service to the communities in which they are embedded. Accordingly, this edited book focuses on informing, broadening and enhancing the pedagogy of museum education and the practices of museum educators. The chapters in this book report independent research studies conducted by the authors who have explored and investigated a variety of issues affecting museum education practice, contextualized across a range of institutions, including art galleries, natural and social history museums, anthropology museums, science centres, and gardens. These studies address a cross-section of contemporary issues confronting the field of museum education including studies of diverse audience and their needs, the mediation of challenging topics, professional training, teaching and learning in informal settings, and reflective practice and praxis.

WHY RESEARCH MUSEUM EDUCATION AND MUSEUM PEDAGOGY?

Museums, unlike schools and universities, serve a very broad set of demographics that constitute the citizenry of communities in which they are embedded. Because most museums are public institutions, many claim a mandate or mission of educational service that is embracing of all peoples, and very often claim a non-exclusionary charter, embracing all ages (Kotlet & Kotler, 2000). Whether implicitly or explicitly stated, the audiences today's museums serve include a diverse range of groups such as families, children, students, teenagers, young adults, middle-aged explorers, and senior citizens. Each of these cultural demographic groupings has different and diverse sub-groups who hold different interests, levels of knowledge,

preferred modes of learning, visiting motivations, and needs as learners (Jensen, 1994). These differences raise significant and complex issues about how museum educators communicate, interpret, and ultimately educate visitors in effective ways, and challenges the adage that one kind of communicative or interpretive approach suits all. At the heart of the issue is the “pedagogy of the museum” – how the museum approaches the educational design of experiences for effective and diverse learning and, with that, the need to think critically about the pedagogical approaches required for the diverse audiences museums serve (Anderson, Piscitelli, Weier, Everett, & Tayler, 2002). Indeed, the museum does have control over the pedagogy it deploys through the way it designs the educational experience of its programs and exhibitions. Certainly, it is true that certain types of museums employ or are biased toward particular kinds of pedagogy. There is not a single pedagogical method that museums can employ for successfully facilitating visitors’ museum experiences and their learning. Different types of museums will strive for different balances (Kotler & Kotler, 2000). For instance, interactive science centres encourage active hands-on and social engagement, whereas art galleries typically encourage thoughtful, often solitary, reflexive engagement with their collections. A great deal has been learned over the last few decades about visitor learning and educational practice in museum settings that can meaningfully inform pedagogy regardless of museum type or their traditions of visitor engagement (Hooper-Greenhill, 2007). Thinking critically about how museums serve a diverse citizenry, with a diversity of learning modes, interests, prior knowledge and visiting motivations, is challenging. Nonetheless, very important if they are to be effective in their educational missions and mandates, and hence reflection on the practices of museum educators is both vital and necessary.

Museum education often reflects its roots; teaching approaches that would look familiar in many school classrooms. While school groups are an important audience for museums and a museum’s relationship with schools is critical to supporting its mandate, the context, desired outcomes and relationships between learners and educators are substantially different in a museum. Are there other approaches that would better serve museums and the diversity of learners found in museums? This question is critical to the future of museum education and can best be explored through the integration of practice, theory and research.

For many museum educators the impact of research and theory on their daily practice may seem inconsequential. Research outcomes may be seen as predictable by practitioners and conversations about theoretical perspectives are largely limited, due perhaps to the realities of a busy work place, a lack of familiarity with different theoretical perspectives, limited opportunity to discuss theory, and/or a general acceptance of the dominant paradigm and therefore no apparent need to question it. Museum scholar and philosopher Hilde Hein (2007) describes the important role of theory in practice, with theory as “a stabilizer that advances investigation into new territories and sustains inquirers through moments of doubt. In the absence of theory anything goes; there are no rational grounds for either adopting or rejecting any position” (p. 30). It is imperative for museum professionals to examine more

deeply their practice through a theoretical and research lens in order to advance our understanding of teaching and learning in museums.

MUSING DIVERSE AUDIENCES, CHALLENGING TOPICS & REFLEXIVE PRAXIS

Diverse Audiences

Museums and museum educators frequently cluster and collectively identify visitors to their institutions by age and group identity of the visitors themselves – for example, young children, school groups, teenagers, family groups, and seniors. For many museum educators these demographics seem to be known qualities and familiar territory in terms of who they are, what they do, and their needs. Much is known about these groups from the literature over the past three or more decades of visitor studies research. Notwithstanding, museums and their educational practices are facing a dynamic landscape of changing social behaviours and norms which brings with it new challenges and for which new knowledge is needed to support the educational needs of audiences. For instance, from the literature over the past 30 years it is easy to find a plethora of studies about how families behave in museums. Yet family behaviour in museums is changing in many ways. For example, there have been changes in how traditional structures might be conceived; rapid changes in technology such as smartphones which bring with it behavioural changes in how families access information in museums; and changing family values about education and how it is accessed in society. As such, we know, but don't know, these audiences. Indeed, the same might be said of other visiting demographics that seem to be known qualities and familiar territory. Hence, while much is known, there is still much that is unknown. Thus, investigation of diverse demographics that come to museums is most worthwhile if we are to effectively mediate the museum curriculum for learning in diverse ways.

Challenging Topics

In addition to describing museums as places for enjoyable and social learning (Kelly, 2007), the rhetoric in contemporary museum literature suggests the purpose of museums includes objectives such as promoting life-long learning, moral development, and thoughtful debate in support of civic engagement (Falk & Dierking, 2000; Hooper-Greenfield, 2000; Gurian, 2006). Layered into these objectives is a need to re-conceptualize museums. Hilde Hein (2007) examines museums through a feminist theoretical lens and conceptualizes museums as open-ended and pluralist, receptive to new ideas and open to looking at old ideas in new ways. She suggests that museums embodying this perspective, “can, by shifting to a fresh vantage point, think of the world in some of the myriad ways that others have found, to unfold and fold it differently and help visitors and supporters to do the same” (p. 34). As museums become more inclusive and reflective of the diverse communities of which

we are a part, it will become a challenge for contemporary museums to help their learners (and staff) think about the world in different ways. This will create more opportunities for museum educators to have conversations about challenging topics with visitors.

Challenging topics in museums may reflect contemporary societal issues such as human rights, complex scientific questions such as genetically modified organisms, and even sometimes taboo subjects, like death, that affect us all. A topic becomes challenging for a number of reasons: ideas may include diverse moral and ethical perspectives; the conversation may be unexpected, taking an educator off guard and unprepared for the conversation; or the content might be contentious. Cameron (2005) frames contentious ideas as ideas that “engage an individual’s or group’s values, beliefs, ideologies or moral position and conflict with empiricist modes of knowledge” (p. 216). She sees that in addition to the more traditional roles of providing information and social experiences, museums are well positioned to provide experiences that foster debate, challenge thinking, and ultimately transform society.

How museum educators navigate these conversations about challenging topics is becoming an increasingly important part of their practice. It is imperative that practitioners and researchers come together to better understand the nuances of this part of a museum educator’s practice. Greater understanding of this will better support educators in developing the skills and knowledge to successfully facilitate these conversations as well as expand our understanding of teaching and learning in museums through reflective praxis.

Reflective Praxis

Museum educators are well served by being reflexive practitioners. Autobiographical and arts based research such as *a/r/tography* (Irwin, 2013) or autoethnography (Ellis & Bocner, 2010) are areas of social science research that encourage self-reflexivity as a way to grow in self-understanding. As museum educators work with diverse audiences, such enhanced self-understanding can be of great benefit to them. Personal reflexive praxis, or the art of taking practice into theory and theory into practice in a continual hermeneutic circle (Gadamer, 1986), not only helps museum educators understand the why, the what, and the how of what they are doing in a much deeper way, but this knowledge also allows them to better serve their diverse clientele. Research that foregrounds the personal allows museum educators to have a greater understanding of the complex nature of their interpersonal roles in a museum setting. This is because a museum setting is often in a state of constant flux through changing exhibitions and changing contexts that museum educators continually interpret in relationship with the public.

Museum educators are the intermediaries, in-between the public and the curatorial and other management departments of a museum. By introducing concepts such as phenomenology into reflexive research, museum educators can delve *behind the*

scenes of the processes and practices of a museum, and by doing so ask meaningful questions about the museum educator's relationship with the complex workings of their institution. Furthermore, this uncovering, of the multiple layers of hidden or informal workings of an institution can create a deep and meaningful personal understanding that can be understood in terms of Bourriaud's, (2002) notion of *relational aesthetics* – "the types of relationships the artist creates between the artwork and visitors" (p. 54) that exist in spaces where museum educators live and work (Choi, 2013). For example, museum educators often act as a cushion between the hidden and unseen authority of the curatorial department and the public. By way of their relational connection with the visitors, museum educators help explain an exhibition. In doing so, they help create meaning for themselves and the clientele they serve, be it children, adults, teenagers, middle-aged or older patrons. Translating an exhibition of any kind to the public is always a dance of meaning-making, and whenever they do so, museum educators enact an ongoing hermeneutic circle of relational esthetics. Reflexive research by museum educators, which enhances personal understanding of themselves, can help render an institution more adaptable and thus open to the vagaries of an always changing public by allowing for a more flexible and open-ended interpretive structure that embraces the relational spaces that are present, but not always accessible, to the museum educators who work within them.

SCOPE OF THIS BOOK

Museum education as a field of study is relatively young in comparison to related disciplines such as museum studies, museology, and visitor studies. Indeed there are but a handful of universities in North America that provide graduate level programs with a focus on museum education. The contributing authors of this book were all graduates from the University of British Columbia's museum education program in Vancouver, Canada. These small independent studies represent the dissertation works from a variety of magistral degrees programs under the umbrella of museum education, including the *Master of Museum Education* (MMEd), *Master of Education (Focus on Museum Education)* (MEd), and *Master of Arts* (MA) programs. The studies embraced and applied appropriately a particular research methodology, including interpretive case study, phenomenography, phenomenology, ethnography and auto-ethnography, a/r/tography, and quantitative survey, each as a function of the research questions which drove the authors' independent investigations. As such, the studies are diverse by their audience focus, institutional focus, methodology, and by the research problems and questions which drove the authors' studies.

The chapter contribution of the book coalesce within three sections: Section 1 – *Museum Educators and Diverse Audiences: Parents, Teenagers and Family Groups*; Section 2 – *Museum Educators' Practice: Challenging Topics and Unique Audiences*; and Section 3 – *Museum Educators' Praxis: Learning Through One's Own Reflexive Research*. Together these themes represent a set of topical issues

germane to informing, broadening and enhancing educational practices in diverse museum settings, and will be of considerable interest to the museum and non-formal education fields broadly. This book will be of value and interest to practising museum educators in all varieties of museum institutions; graduate students in museum studies and informal education programs; academics who share an interest in visitors studies, museum education, museum studies and museology; and teachers and community educators who wish to extend their professional practice beyond the bounds of the classroom.

REFERENCES

- Anderson, D., Piscitelli, B., Weier, K., Everett, M., & Tayler, C. (2002). Children's museum experiences: Identifying powerful mediators of learning. *Curator*, 45(3), 213–231.
- Bourriaud, N. (2002) *Relational aesthetics* (S. Pleasance & F. Woods with the participation of M. Copeland. Trans.). Paris, France: Les presses du reel.
- Cameron, F. (2005). Contentiousness and shifting knowledge paradigms: The roles of history and science museums in contemporary societies. *Museum Management and Curatorship*, 20(3), 213–233.
- Choi, S. (2013). Relational aesthetics in art museum education: Engendering visitors' narratives through participatory acts for interpretive experience. *Studies in Art Education*, 55(1), 51–63.
- Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An overview [40 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 12(1), Art. 10. Retrieved from <http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108>
- Falk, J., & Dierking, L. (2000). *Learning from museums: Visitor experiences and the making of meaning*. Walnut Creek, CA: AltaMira Press.
- Gadamer, H. G. (1965/1986). *Truth and method* (G. Bardon & J. Cumming, Trans. & Eds.). New York, NY: Cross Roads Publishing Comp.
- Gurian, E. (2006). Along the continuum, museums and possibilities. *Open Museum Journal*, 8, 12.
- Hein, G. (2005). The role of museums in society: Education and social action. *Curator*, 48(4), 357–363.
- Hein, G. (2006). Progressive education and museum education. *Journal of Museum Education* 31(3), 161–174.
- Hein, H. (2007). Redressing the museum in feminist theory. *Museum Management and Curatorship*, 22(1), 29–42.
- Hooper-Greenhill, E. (2000). Changing values in the art museum: Rethinking communication and learning. *International Journal of Heritage Studies*, 6(1), 9–31.
- Hooper-Greenhill, E. (2007). *Museums and education: Purpose, pedagogy, performance*. New York, NY: Taylor & Francis.
- Irwin, R. (2013). Becoming A/t/t/ography. *Studies in Art Education*, 54(3), 198–215.
- Jensen, N. (1994). Children, teenagers and adults in museums: A developmental perspective. In E. Hopper-Greenhill (Ed.), *The educational role of the museum* (pp. 110–117). London, England: Routledge
- Kelly, L. (2007). *The interrelationships between adult museum visitors' learning identities and their museum experiences* (Doctoral dissertation). Sydney, Australia: University of Technology.
- Kotler, N., & Kotler, P. (2000). Can museums be all things to all people? Missions, goals, and marketing's role. *Museum Management and Curatorship*, 18(3), 271–287.

ACKNOWLEDGMENTS

We wish to thank the contributors of the book – former graduate students of the museum education program at the University of British Columbia (UBC), Canada, who are making significant contributions in the field of museum education. Also, we wish to thank the many museum institutions who partnered with the authors' research studies represented in this book. Without your collaboration and tremendous support these informative studies would not have been possible. In addition, we are grateful for the diligent efforts of project assistants Jim Bigari and Elizabeth Namazzi who provided logistical and editorial support for this project. Finally, we wish to acknowledge the financial support of the Department of Curriculum and Pedagogy, and the office of Professional Development of Community Engagement at UBC, for their financial support towards the development of this book.

DAVID ANDERSON

SECTION 1: INTRODUCTION

Museum Educators Supporting Diverse Audiences: Parents, Teenagers and Family Groups

This section contains four chapters representing studies of museum educators' support of parents, teenagers, and family groups. Understanding museum visitors by these groupings is familiar territory for most museum educators. Much is known about family groups as museumgoers (cf., Ellenbogen, Luke, & Dierking, 2007; Hooper-Greenhill, 2013) and this demographic has been widely studied for decades in the field of visitor studies. Notwithstanding, there is much that the field does not know about their learning, behaviour, engagement and perceptions. For instance, teenagers as a sub-group of families are a highly under-researched group, and the changing landscape of social behaviours and norms in our societies is bringing with it new challenges and a need for new knowledge to support this audience and its constituent sub-groups. Each of the studies in this chapter seeks to provide new insights about how museum educators can better support learning of these diverse audiences in diverse museum contexts. The key themes of this section include: home educators' perspectives of museum as resources; parents' facilitation of learning for their families in art galleries; parents' perceptions about their engagement and discourse mediated by exhibit labels in science museums; and teenagers and their learning outcomes from a science-based after-school program in science centres.

Stephanie Chong's chapter, "Home Educators' Views of Museums: Challenges and Opportunities of Supporting Non-Traditional Learning", considers the perceptions that home educators (parents of home learners) hold of museums in their endeavours to support the home schooling of their children (home learners). The chapter is highly topical for museum educators given the sizable demographic they currently represent in North America and elsewhere. Furthermore, the considerable growth in the number of school-aged children being home schooled today, and in the projected future, represent a sizable demographic who hold the strong potential to utilize museums and museum resources to support their home learning experience. Home educators seek a variety of rich learning experience beyond the bounds of the home learning context to support their children's learning and their learning objectives – museums are increasingly seen as important support resources for this

audience. Chong points out that because home learners are neither a school nor a family group, but somewhere in between, engaging with home learners in museums can provide a unique challenge for museum educators and informal learning institutions. Chong further asserts that despite these challenges, understanding how home educators (parents of home learners) use museums to support their home learners and understanding what they are looking for can help museum educators to develop relevant learning options, potentially resulting in long-term and loyal visitors. Few studies have tackled the investigation of the perceptions of home educators' view of museums, and as such the contribution of this study is significant towards how home educators are currently using museums, their prior experiences at museums, and what they are looking for in future educational programming.

Pilar Wong's chapter, "On Our Own: Family Experiences in Art Museums Outside of Facilitated Programming", considers the very much under-researched demographic of parents as facilitators of learning experiences for their children in art galleries. In particular, Wong's study focuses on the experiences, needs, and perceptions of parents who visited the Vancouver Art Gallery with their families with respect of their facilitation of learning experiences for their family group outside the bounds of institutionally-structured in-gallery programming. Such parents take on an additional role as teacher and are desirous to enrich their children, but in many cases are not expert in pedagogy of mediating gallery experience. Wong aimed to determine the specific ways in which the Vancouver Art Gallery, and by extension other art museums, can better support family visitors outside of facilitated programming for this demographic. Specifically, the study determined how parents experience art galleries, and their perceptions of resources they were looking for to support their family's learning experience in art museums. Wong identifies a gap between what such families need and what art museums are currently offering, and her study takes an active step towards closing this gap through the incorporation of family visitors' needs and preferences into examples of ideal educational resources that can be offered by art museum educators to better support this demographic. Wong's study is highly topical at a time when museums and galleries are faced with budgetary pressures to limit public programs, and increasingly visitors are left to experience the museum on their own, particularly visitors in family groups.

Jennifer Hall's chapter, "Parents' Perspectives about Exhibit Label Content in a Science Museum", in like manner to Wong's study, reports an investigation into ways to better support family learning in science museums through engagement and discourse mediated by exhibit labels. Hall correctly asserts that little is known about what parents think about when they choose to read, paraphrase and/or integrate phrases from exhibit labels into their actions and conversations with their children. Hall's study investigates the role of exhibit label text in the family learning context from the perspective of parents, and in particular what label content

is important to parents and why? Employing Crowley et al.'s (2001) explanatory label categories (*causal*, *analogical* and *principled*), Hall interrogated the personal thoughts, priorities and attitudes of parents concerning different label text in support of their children's learning associated with an exhibit. The study demonstrated that a hybridized combination of explanatory exhibit label text best serves to support the learning requirements of a wide range of parents. Furthermore, Hall's findings suggest that parents use exhibit labels to transform a largely child-led activity into a collaborative learning experience. Parents appear to use specific label content, including instructive statements, open-ended questions and explanatory references, to extend conversations with their children, to understand their children's actions, and to find ways to participate in the child-centred exhibit experience and learning. Hall's study is significant because it powerfully illustrates that the content of an exhibit label can be a significant catalyst in promoting family learning and it is worthwhile for both museum educators and researchers alike to consider (and re-consider) its functionality within, and relevance to, the family's social learning context.

Finally, Marina Mehai's chapter, "Sparks of Learning: Insights from an After-School Science Museum Program for Teenagers", like Chong and Wong's studies, reports an investigation of an under-researched demographic in museum – that of teenagers and their learning outcomes from a science-based after-school program in science centres. This qualitative interpretive case study examined the learning experiences of teenage participants in an after-school science and technology program. The outcomes revealed that the teenagers learned over time and that their own learning was not just content-based, but rather, manifested in many different domains, including the social, affective, metacognitive, personal and cognitive. Detailed analysis of the case yielded a list of indicators of learning that could then be employed in future program evaluation of this and other similar museum-based programs. Mehai asserts that the use of learning activities, especially those involving play and highlighting participants' interests, would inevitably promote learning within youth programs. Engaging learning activities along with expert facilitators can work hand-in-hand to provide youth with unique opportunities to learn beyond the classroom. Mehai's study provides valuable insights and testimony that can inform science learning in science centres, and the future design and implementation of science programs for youth audiences.

Collectively, these four studies provide new insights and springboards for further detailed investigations of how museum educators might support the learning and educational needs of parents, teenagers, and family groups in a diversity of museum settings. Museum educators know much about family groups, yet there is still a great deal more to know and understand.

D. ANDERSON

REFERENCES

- Crowley, K., Callanan, M. A., Jipson, J. L., Galco, J., Topping, K., & Stranger J. (2001). Shared scientific thinking in everyday parent-child activity. *Science Education*, 85, 712–732.
- Ellenbogen, K. M., Luke, J. J., & Dierking, L. D. (2007). Family learning in museums: Perspectives on a decade of research. In J. Falk, L. D. Dierking, & S. Foutz (Eds.), *In principle, in practice: Museums as learning institutions* (pp. 17–30). Plymouth, England: AltaMira Press.
- Hooper-Greenhill, E. (2013). *Museums and their visitors*. Chicago, IL: Routledge.

David Anderson
Department of Curriculum and Pedagogy
University of British Columbia

STEPHANIE L. CHONG

1. HOME EDUCATORS' VIEWS OF MUSEUMS

Challenges and Opportunities of Supporting Non-Traditional Learning

INTRODUCTION

It is widely acknowledged that home learning¹ and museum education as separate entities are growing movements (e.g., Adams, 2005; Isenberg, 2007; Fraser Institute, 2001). However, there is almost no information in the published literature on evaluating and optimizing the experiences of home learners within museums. One exception is a study completed by Adams (2005) which addresses trends within the home school movement in the United States, existing museum practices, and the relationship between home schoolers and learning within a museum setting. A thorough literature review reveals almost no equivalent research in a Canadian, and specifically, a British Columbian context.

The purpose of this research study was to gain insight into how home educators are currently using museums to support their home learners' education, and how museums can better support the learning and personal goals of home learners and home educators in British Columbia (B.C.). Specifically:

1. How are home learners and home educators using resources offered at museums?
2. Given the highly individualized nature of home learning, what are these home educators looking for from museums?
3. Do home educators believe that their personal and learning goals for their home learners are being fulfilled?

This research is relevant in a field in which there is growing interest in the role of museums in learning. According to the British Columbia Ministry of Education (2013), the number of individuals engaging in home learning has been steadily rising in British Columbia, particularly since 2001. This increase results in a potentially new market for museums. However, programming needs to be appropriately developed and administered in order for them to be monetarily and pedagogically beneficial. Understanding how home educators and home learners are currently using museums and what they want from future programming is an opportunity to help develop relevant programming and learning options for these underserved communities in British Columbia.

Home Learners and Learning in Out-of-School Settings

Home learning has been a growing movement in British Columbia and the rest of North America (Martin-Chang, Gould, & Meuse, 2011). Home educators (usually the parents) take responsibility for teaching their children at home or outside the formal education system (Musco, 2011; Basham, Herrifield, & Hepburn, 2007). Learning can exist within the home, at museums, outside, while traveling, and at other venues (Adams, 2005). In the 2012/2013 school year, there were over 31,000 individuals enrolled either in distributed learning or home schooling in British Columbia² (British Columbia Ministry of Education, 2013).

Parents wishing to pursue learning outside of a traditional K-12 school setting in British Columbia have two options. The Distributed Learning program is administered by the British Columbia Ministry of Education. These students are enrolled in a public or private distributed learning school and meet the B.C. curriculum Prescribed Learning Outcomes (PLOs) from home or abroad. Learning is supervised by a certified B.C. teacher and students are expected to complete the same examinations as students learning in school (SelfDesign Learning Community, n.d.; British Columbia Ministry of Education, n.d.). Alternatively, parents take full responsibility for their child's education. They are not required to meet provincial standards but students do have the option to complete provincial exams (British Columbia Ministry of Education, n.d.).

Home schoolers come from a variety of ethnic, religious, cultural, educational, and economic backgrounds (Arai, 2000; Adams, 2005). The reasons for parents deciding to home school their children are diverse (Angelis, 2008). For example, parents may look for a more spiritual focus to their child's education, want to support their child's special needs, or feel dissatisfied with the formal K-12 education system (van Galen, 1988; Arai, 2000). Others believe that education should consider a child's innate interest in learning as well as their individual learning style (van Galen, 1988). Regardless of the motivation to engage in home learning, opportunities are often developed for student-led, intrinsically motivated and more in-depth inquiry that builds on their personal and previous knowledge. Characteristically, learning is flexible, multidisciplinary and interdisciplinary; subjects are often presented and explored in context, rather than as separate subjects (Adams, 2005).

There are many provincial and regional groups that support home learning in British Columbia. Some of these groups provide a physical space or field trips for home learners to learn in a social setting. There are also networks of home learners that span across the globe, facilitated by the development of the internet, handheld devices, and other technological innovations (Basham, Herrifield, & Hepburn, 2007). Students and parents can contact professionals to gain technical expertise, as well as other home learning families to share experiences, tips, and resources.

Museums can be well adapted to home learner audiences because they often share similar values and perspectives on education such as nurturing an individual's intrinsic desire to learn and providing a free choice and non-evaluative environment

(Tran, 2007). Both also place importance on building on one's prior knowledge (Adams, 2005; Falk & Dierking, 2000; Anderson, Storksdieck, & Spock, 2007); scaffolding (supporting a student's learning through guided steps that are gradually removed until the student becomes self-sufficient); and the social interactions that occur in the learning process (Adams, 2005).

Despite this, preliminary research from this study suggests a disconnect between home educators and museums. Perhaps this is why the kinds of programming that Adams (2005) identified as being popular for the home learners that she surveyed (classes allied to special exhibitions – 30%, docent led tours – 26%, home school days – 25%) were not in line with the types of programs that were being offered by the institutions in her study (docent led tours – 48%, classes allied to State Curriculum – 19%, classes allied to special exhibitions – 16%). There appears to be very little evidence that museums connect with home educators to understand what their preferences and needs are from a museum programming perspective. However, it seems reasonable that improved communication can result in museums more effectively meeting the needs of home educators; thus, the motivation for this study.

Availability of Programs for Home Learning Families at British Columbia Museums

A review of twenty museum websites in British Columbia revealed that K-12 programming was available at all the organizations. However, only five specifically make reference to home learners on their websites. Interestingly, at least three of the organizations consider curricular connections when designing home learner programs, although it is uncertain as to whether this is a time or cost-saving effort (it is easier to convert already existing programs) or if it was intended to be able to meet the curriculum requirements of distributed learning students.

There are a few possible reasons why home learner programming can pose a challenge for museums and museum educators. For example, these programs can be difficult to administer. With K-12 schools, one teacher or school administrator registers a class of thirty students. However, with dedicated home learner programs, there are multiple people registering for the same workshop. The increased time handling logistical details reduces the profitability of the program. There is also no guarantee that the minimum required number of students for the workshop is met. Institutions that rely on group and general admissions for funding may not be financially secure enough to provide programs that are not guaranteed to be profitable.

For museum educators, they may have little or no understanding of what experiences and abilities students come with (Adams, 2005). Home learners are often used to individualized attention (Farris & Woodruff, 2000) and may not be as familiar with learning in a group setting. Grouping home learners by age becomes no longer relevant; however, if students are grouped by ability, then differences in maturity may present a challenge for educators. Within K-12 school groups, parents

act as chaperones and may have students in their groups who are not their children. Chaperones may be involved in the workshop, but the museum educator is in charge of the program. By comparison, home educators are more involved and may insert themselves into programming, changing the group dynamics. Balancing the needs and goals of parents with the needs and goals of children may be unfamiliar for museum educators. Also affecting the dynamic of the class are siblings, including babies and toddlers, who accompany participants (Adams, 2005).

Despite all of these challenges, providing resources and programs for home learners can be rewarding, as it allows opportunities for new ways of learning and teaching and can create long-term and loyal visitors. The first step in narrowing the gap between what home educators are looking for and what museums are offering is to create a venue for communication between museums and home educators. This study begins this process by looking at how home educators currently use museums and how learning and personal goals can be enhanced through museum visits. Future research should examine how to strengthen the relationship and communication between home learners, home educators, museum educators, and museums.

METHODOLOGY

An online survey methodology was employed to answer the research questions and gain an understanding of the perceptions of museums as a resource for home educators and home learners. The survey relied heavily on open-ended responses from home educators and permitted qualitative description about the beliefs, attitudes, and values of museums as a resource for home learners.

Survey data were analyzed qualitatively for emerging themes. In this way, the study could be characterized as a variety of phenomenography (Marton, 1986, 1981) that investigated the qualitatively different ways in which parents experience or think about museums as resources for home education. Results were also described quantitatively. A full quantitative analysis was not conducted. As the aim of home learning is to provide individualized learning opportunities, thus trying to create generalizations through quantitative research was meaningless for this situation.

Research Design

Data for this research was collected using an online survey platform, *FluidSurveys*. Surveys were chosen because they are able to obtain information from a larger sample size and are economical in both time and resources as compared to other data collection methods such as face-to-face interviews (MECHANISMS, n.d.).

The survey in this study used a combination of multiple choice, Likert scale, semi open-ended, and fully open-ended questions. In some cases, participants were asked to answer a close-ended question followed by an open-ended rationale to triangulate and/or provide more explanation for an answer. Participants were recruited through

snowball sampling. Snowball sampling is “when the researcher accesses informants through contact information that is provided by other informants” (Noy, 2008, p. 330). Noy (2008) also suggests that snowball sampling is an effective method for obtaining information from “hidden” or less accessible populations. This is applicable to home educators because they are often well connected within their own networks. However, these networks are dynamic and fluid, making it potentially difficult for an ‘outsider’ to get in contact with large numbers of home educators. Organizers of over 100 home learner networks were sent the survey link and asked to distribute it to their communities. Going through networks respected the confidentiality and anonymity of respondents.

While surveys are appropriate for the bounds of this study, there are some inherent biases and disadvantages that are associated with them. These can be delineated into three categories: 1) sample biases, 2) design biases, and 3) interpretation biases. Sample biases may occur when the individuals being surveyed are not representative of the entire population (Stat Trek, n.d.). For example, people who are more likely to answer an online survey are those who have easy access to computers and the internet. Because online surveys are voluntary, this may lend itself to individuals who have strong opinions and perhaps less to those whose opinions fall in the middle ground. Design biases include leading questions (implying that a certain answer is right or wrong), double-barrelled questions (two questions in one query), and uncommon or confusing language (Choi & Pak, 2005). Care needs to be taken to ensure that wording is clear and consistent. For Likert scales, the same number of categories should be presented for each question and the name of the categories should appear in the same position (e.g., ‘strongly agree’ should stay on the right or left for all questions). Interpretation biases include subconscious or conscious lenses through which the researcher views the subject area. The survey used in this study was reviewed by six external sources including two museum educators, two university professors, one home learner, and one home educator to ensure that the questions were clear and to minimize biases that could affect responses.

Data Analysis

Conventional content analysis and emergent theme analysis is appropriate when describing phenomena in a field where there is limited literature or existing knowledge, which is the case with home learning in British Columbia (Hsieh & Shannon, 2005; Strauss & Corbin, 1998). Themes and codes were identified and subdivided as necessary, and networks and connections between these themes and subdivisions were identified among participants’ survey responses. Although the author was aware of her pre-conceived ideas working with home learning families based on her previous experiences, not using a pre-conceived coding scheme allowed more flexibility in identifying unexpected results (Hsieh & Shannon, 2005).

RESULTS

Demographics of Participants

The online survey used in this study was open from April 20, 2013 until May 22, 2013. During this time, 112 home educator respondents recorded answers in the online survey. While 53% of the respondents lived in the Metro Vancouver area, there were also respondents who represented the Vancouver Island/Southwest Islands, Kootenay, Thompson/Okanagan, and Cariboo regions of British Columbia. 98% of respondents self-identified as parents of home learners and 69% of respondents had two or more students involved in home learning. Students were a variety of ages (Figure 1). Additionally, 67% of respondents claimed to follow the guidelines and curriculum set out by the BC Ministry of Education.

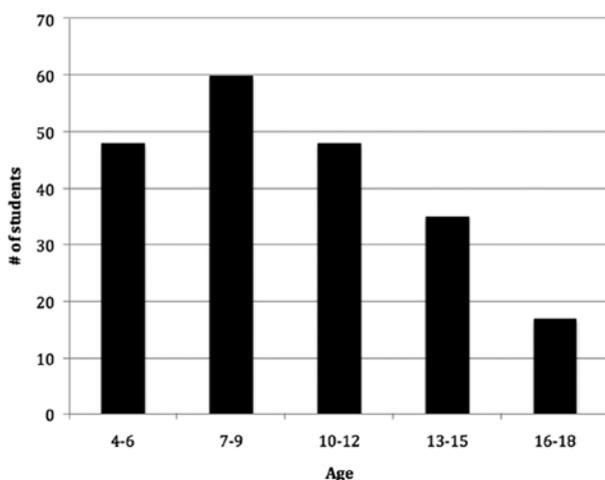


Figure 1. Ages of home learners; $n=108$. Note that multiple answers were permitted

Museums Were Relevant to Home Educators and Home Learners

The majority of respondents took advantage of going to museums (92%). Inaccessibility and perceived lack of usefulness or lack of appropriateness of programming appeared to be barriers to those who did not use museums. In this study, 76% of families visited a museum more than three times a year, spending an average of one to three hours (77%) per visit. The top four reasons that respondents identified as being important motivations for going to museums included having their home learners: learn/see something new (83%); learn/see something that supplemented their learning objectives (66%); gain access to materials and concepts

that were otherwise inaccessible (54%); and attend programming with other students (47%) (Figure 2). In this survey, 95% of respondents' families took advantage of educational programming. These learning-centred motivations are supported by respondents' belief that museums were generally seen to be good places for students to learn.

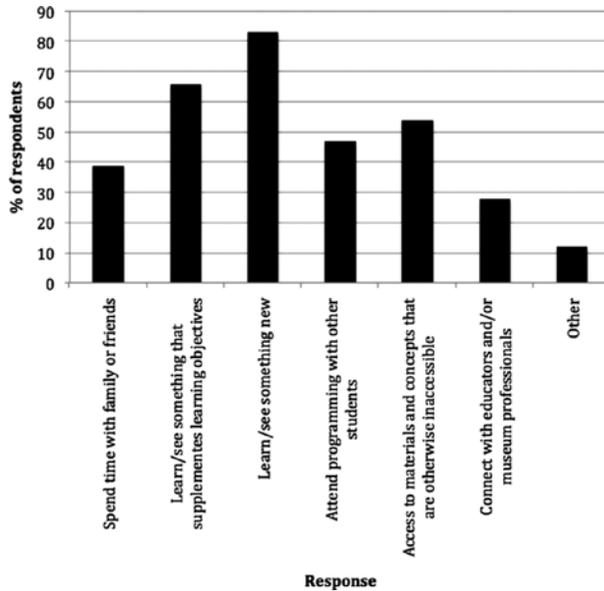


Figure 2. Motivations for going to museums as identified by home educators; $n=94$.
Note that multiple responses were permitted

For many home learning families, their trip to the museum was integrated into discussions and learning both prior and following their visit. This allowed them to explore concepts in detail and integrate them into their personal lives. In this survey, 65% of respondents engaged in pre-visit activities and 85% of respondents engaged in post-visit activities. One respondent stated that:

Post-visit conversations and reflections are extremely important for us. We do this as a family, and with friends we may have done the visit or workshop with. We research questions that (hopefully) came up as a result of the visit.

As it appears that these activities are important to home educators, this could be a potential area of growth for museums. One opportunity could be to improve museum websites and online resources, as 52% of respondents mentioned their use of these resources when asked about how they engage in pre- and post-visit activities.

Improvements Could Be Made in the Attitudes and Understanding That Museum Educators and Institutions Had Towards Home

One of the challenges of being part of the home learning community is that non-home learners often do not have a good understanding of their unique learning interests and needs. One parent stated that, “most people who talk about home schooling have no idea what it really means. They think about school. It’s not a school – home learning is an individually directed process / experience based learning.” In some cases, home educators reported that their children were made to feel unwelcome, even being chastised by museum staff before doing anything wrong. One home educator commented:

One of my sons feels strongly that museum staff often discriminate against young people in their facilities... sometimes security people or staff will rudely ask a young person to step away from something, or will tell them “not to touch” when they weren’t touching, nor were they making any move to do so.

Home Educators Were Looking for Appropriate Educators and Programming

Home educators in this survey were looking for hands-on, experiential, in-depth, interactive, and diverse opportunities. They wanted their children to create meaningful connections with others and with concepts that were relevant to their lives. They were most interested in special interest workshops not related to the B.C. curriculum or special exhibits (79%), classes related to special exhibits in the museum (73%), and guided tours (58%) (Figure 3). Classes aligned with the B.C. curriculum were less popular (37%), which was not surprising given that many of the respondents felt that current home learner programs were too tied to mainstream curriculum.

Some respondents were frustrated with the stagnant nature of offered programming; they were looking for new ways to keep their home learner(s) engaged, rather than repeating the same program every year. Providing programming that is not appropriate can actually hurt an organization, as “word of mouth is very important” and a bad experience can have a ripple effect. As one parent stated about one organization’s program, “they [a B.C. organization] have a reputation of being dumbed down and a waste of money so I’ve never sent my kids.”

Museum educators were also believed to be an integral part of good programming. Home educators felt that museum educators therefore need to acknowledge the diversity and individuality of the home learners in the group. In addition, they need to be flexible, knowledgeable, responsive, engaging, and willing to allow a conversation to go in a direction that was not originally intended. As one respondent noted, museums need to “work at finding a good fit of program leader. Someone who isn’t just about classroom management... Find someone who is ok with kids who ask questions and wants to engage.”

HOME EDUCATORS' VIEWS OF MUSEUMS

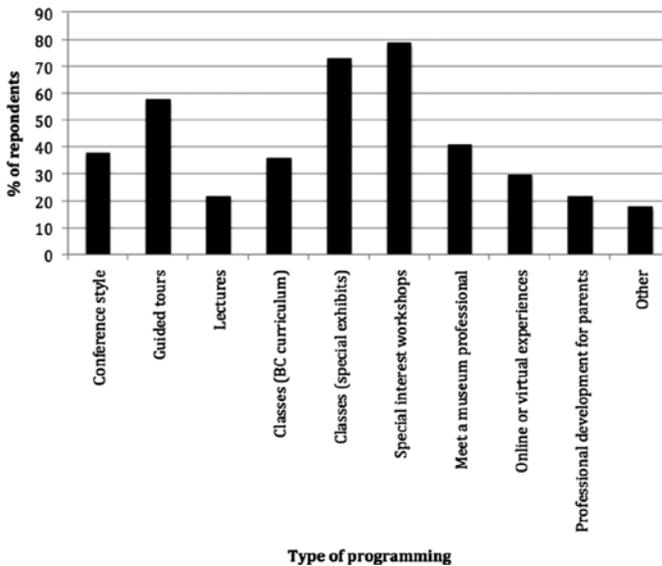


Figure 3. Preferred educational programming; n=96.
Note that multiple responses were permitted

Home Educators Value Community Building Efforts

There is a common misconception that home learning families live and learn in isolation. However, as one parent articulated:

We are not isolated and we “review” what’s offered to us all the time on our private email lists. So it [*sic*] word of mouth is very important in these situations an[d] if a museum wants to create more daytime traffic then its [*sic*] important that we are listened to and our opinions are sought rather than ignored.

This home educator goes on to say that “they [a Vancouver museum] have created home school programming but not worked with the community at all and are not interested in feedback about how boring and below level their programming is.” In contrast, another home educator suggested that an organization adapt a regular K-12 program for a multi-age home learner audience, and felt that her input was well received. She stated:

They did an amazing job of organizing that and my kids have attended those programs for the past few years. These programs are very popular with home schoolers and myself as there’s “no group to organize!” and the kids still get to hang out with their peers instead of strangers or be inserted into a group of classroom kids.

Organization Logistics Had an Impact on the Experience

Logistical issues were commonly identified as having an impact on if and how home educators used museums and museum resources to support their home learners' education. These included:

- a. *Time of day*: Many home learners participate in activities such as dance or music lessons. These programs tend to be offered in the afternoons and on weekends. Consequently, in order to attend these activities, home educators felt that museum programming needed to be during 'regular' school day hours. One parent stated, "home schoolers will travel to get to you, but need to be able to return to their "home turf" in time for after school activities, which typically start at 3:30pm."
- b. *Number of students*: Individualized learning is a priority for many home educators. They were looking for low instructor to student ratios and class sizes of less than 20 students.
- c. *Multiple ages allowed in programs*: In this study, 69% of home educators had two or more home learners. Because many home learners function as cohesive units, there was a demand for either multi-age workshops, or multiple workshops for different age levels running concurrently. As one home educator described, "Program's [*sic*] need to be geared for multiple age groups attending at one time. The whole concept of home schooling is to have your family together. Sometimes younger siblings are not welcome to attend." Some parents also expressed that there were not enough programs geared for the tween to teen crowd. However, too big of an age spread was considered detrimental for older home learners.
- d. *Cost*: Cost was a limiting factor as to whether home learners were able to participate in organized educational programming at museums, as some families were single income households.
- e. *Accessing educational programs*: Some home educators experienced challenges with accessing educational programs at museums. In order to book a school program, home learners have to pretend to be a school group (e.g. organize enough students to meet minimum numbers requirements); a potentially challenging task for home educators given their loose networks. However, some museums were applauded for having 'home learner only' days, where individuals could sign up for programming that would normally only be available to school students. Families who lived far from museums looked for online or virtual experiences that related to in-house and external exhibits.

DISCUSSION & RECOMMENDATIONS

As is evident from the results of this study, museums are generally seen as a good opportunity for learning; however, there are many obstacles that home educators face. This section provides recommendations for future practices for both museum educators and institutions, with the goal of being able to better support the learning and personal goals of home learning families in British Columbia. These

suggestions attempt to address five major themes that arose from this survey on instructor and museum understandings of home learning, communication and community building, teaching style, logistics, and program content. Some of the suggestions are intentionally open-ended since there is no 'one size fits all' solution or 'best practices'³ to providing educational programming for home learners. The challenge is to find what works for each educator and each museum in their specific situation.

For Museum Educators

Get to know your audience. For any program, it is always useful to understand who the audience is. What is their experience with the topic? What are they most interested in? Students may be different ages and at different ability levels. It is important to take advantage of the time prior to the workshop while students are coming in to ask their names, ages, and the one thing that interests them the most about that day's topic. This enables the educator to make a quick assessment of the level and needs of the group and adapt accordingly.

From the survey responses from this study, many home learning families appreciate the effort that museum educators and museums make in maintaining a positive relationship with both home learners and home educators. A strong relationship is beneficial for museum educators as it allows them to adapt more appropriately to the audience and can help with classroom management.

Allow room for student-directed learning. Numerous academics and practitioners have explored the benefits and challenges of student-directed learning (e.g., McIntosh, n.d.; May, 2013; Wright, 2013; Barron, 1998). Students take responsibility and become aware of their own learning process (Barron, 1998). As a result, they are more engaged, empowered, and self-motivated to explore specific ideas or topics that interest them. Museum educators need to be receptive, flexible, and creative, listening to both verbal and non-verbal feedback. They also need to be willing to follow the natural progression of conversations, while ensuring that it links back to the original topic (McIntosh, n.d.).

Because home educators mentioned that they are looking for non-standardized, flexible programming, this opens up the possibility of more experimental and interdisciplinary options. For example, one interesting project from London had a group of twelve students aged 9–11 work with the Wallace Collection to develop a family-focused exhibit. They were responsible for selecting the exhibit theme, choosing artefacts to be showcased, designing the exhibit space and interpretative tours, and promoting their work (Simon, 2010). Although this was a large project, there are components that could be used in short-term museum programming. For example, home learners could be offered a few activities from which they choose to pursue or chances for home learners to become the 'experts'. Museum educators should also consider multi-disciplinary approaches, such as how arts-based

approaches could be incorporated into science workshops and how science could be used to pursue issues of social justice.

Find ways to connect programming to everyday life. Information that relates to a child's lived experience is more likely to be remembered. Home learners love being able to share their experiences and can be more willing to be engaged and excited if they can find a way to relate the concepts to their own lives. Museum educators should also provide suggestions of ways that knowledge can be applied after they leave the workshop.

For Museums

Seek and incorporate feedback. Being open to feedback and changes provides better programming for home learners and shows that the organization is interested in meeting the needs of their visitors. For example, museums can seek feedback through surveys or questionnaires at the end of each workshop or session. What works? What needs improvement? How are they hearing about the program(s)? Museum can also look at trends in their attendance and demographics. Are home educators and home learners returning year after year? If not, why? How far are they willing to travel to come to the program? How does this reflect on the perceived quality of the program and advertising?

Based on the results of this survey, museums should consider factors such as the time of day (Monday to Friday, during the day), the cost (low or group rate), the number and ages of students (under 20), program topics (varied, not stagnant), and advertising (easy to use website with options clearly laid out). Many parents also wanted multi-age programming; however, there is an apparent contradiction between the request for multi-age groups and the teens and tweens who do not want to be 'stuck' with little kids. One recommendation is to offer more than one program at the same time for different age groups. This allows parents to make one visit while allowing multiple children to have similar experiences. Other interesting ideas from the survey included: conference style home learner days, where students get to choose from a variety of workshops based on their interest level; Coursera-style online workshops; programs using or about emerging technologies; and 'meet and greets' for parents to get to know museum professionals.

Find ways to extend the museum experience past the visit. Many home educators expressed that visits to museums were often coupled with further investigation either before or after the visit. Numerous studies have corroborated this idea, noting that both pre- and post-visit activities enhance the experiences that learners have at museums (e.g., Falk & Dierking, 2000; Anderson et al., 2006; Coughlin, 2010). Anderson et al. (2006) notes that pre-visit activities can help provide context for on-site activities, and that post-visit activities "strengthen new connections and give context for future experiences" (p. 366). Providing pre- and post-visit resources can

also extend the contact and relationship that home learning families have with the museum.

Take advantage of modes of communication that already exist. A simple Internet search of 'home learner networks in British Columbia' revealed over a hundred online groups using social media platforms such as Yahoo Groups and Facebook. If this is how home educators are currently communicating, then contacting these online communities could be an efficient means for promoting educational programming including pre- and post-visit activities and other resources. One parent supports this idea, stating:

One thing that may be helpful is to inform/promote with the support group (via email). The message can be 'forwarded' to the group membership, and the families are then informed of what is available and make their own choices.

Encourage understanding of home learning within institutions. How can museums develop programs for an audience that they don't understand very well? Understanding and embracing diversity within the home learning community will hopefully create a more welcoming learning environment for home educators and home learners. In the long run, this can prevent situations where they feel unwelcome in museums, as previously described.

Develop a structure that rewards long-term relationships. Having a longer-term and positive relationship with home educators can be highly beneficial. However, creating long-term relationships can be challenging if programs are one-time events. One recommendation is to develop a model that keeps home educators and learners coming back. For example, museums could have a series of workshops that happen at the same time each month. Museums could also provide monetary incentives such as discounts for home educators who sign up for all the workshops at the start, for signing up more than one student, or for recommending the program to other participants. Having a longer-term structure is mutually beneficial as it provides more stability for the home learner (e.g., a guarantee that the program will not be cancelled and a better relationship with the museum educator leads to more fluid learning) and for the museum (e.g., less administrative time since repeat attendees can be handled in one transaction and a confirmation that minimum numbers are met from month to month).

Create meaningful relationships with home learning communities and other museums. One way to bridge the gap between home educators and museums would be to create a forum for sharing ideas. When asked if they would like to be involved with designing programming for home learners at their local museum, 63% of respondents answered 'yes' or 'maybe'. From this survey, community building is incredibly important for home educators. Home educators work through word of

mouth and make recommendations on how they feel that they have been treated. It is important to build relationships with the students and with the parents; however, this is not a fast process! Like all relationships, they need to be nurtured over time.

Museums should also consider collaborating with other organizations; find out what successes and challenges that they have encountered and learn from them. Collaborations could also include ensuring that home learner programming does not occur at the same time at different museums and cross promoting other museums' opportunities for home learners. For example, three museums in Ashville, North Carolina, collaborated and coordinated their home school programs to avoid overlap so students could attend all of them if they wanted (Adams, 2005). One parent enthusiastically suggested, "programming that involves multiple museums (this would be SO GREAT!)."

CONCLUSION

Home learning is a growing movement in British Columbia. This provides a new opportunity for museums to reach individuals and communities that have not been effectively served by museums in the past. Home learning families are highly diverse who engage in home learning for various reasons. Home learners are often self-motivated and used to individualized attention. For many families, using museums is an integral part of their learning process. Museums are seen as resources (both in-house and online) that help to supplement their learning goals and to initiate further discovery.

From the available literature, a search of available programs in B.C. museums, and the results of this study, it appears that there is a gap between what is being offered and what home educators are looking for. While some institutions do provide educational programming specifically for home learners, it is not necessarily well suited to the needs and interests of the intended audience. Perhaps one of the biggest challenges for home educators is that the reasons why and how they engage in home learning are not well understood by those outside of their communities. In many ways, this individualized, self-motivated, and often inquiry-based learning style is so different from the more regimented, learning outcome-based model of traditional K-12 schools that museums are used to accommodating. The challenge, therefore, is for museums to step away from the traditional school model towards something that is more flexible, innovative, and responsive to both the learners and parents. Research done by Kreps (2009) and the results of this study suggest that museums should look towards partnerships with communities and other stakeholders in an effort to engage in new models of practice.

This study is the first step in actively incorporating home educators' perspectives and feedback into educational programming offered by museums. Future research should consider a more in-depth look into the motivations for using museums as places for learning by home learner families, how to encourage inquiry and new forms of engagement in museums, how to more effectively build relationships with

home learner communities, and how to incorporate collaborative teaching between museum and home educators. Despite the challenges that this flexible model can pose, providing resources and programs for home learners can be a highly rewarding process that creates meaningful and long-term relationships with home learning families.

ACKNOWLEDGMENTS

The author wishes to thank all of her friends, family, and colleagues – particularly the home learner community, Justin Lisaingo, Sylvia Blake, Eugene Luk, Erika Smith, Rui Qing Tan, Valerie Chong, and Colin Young for their support in this research.

NOTES

- ¹ In British Columbia, there is a distinction between the term 'home learners' (individuals who engage in the Distributed Learning model which follows the B.C. curriculum) and 'home schoolers' (individuals who do not follow any aspect of the B.C. curriculum). The majority of individuals who engage in non-traditional learning follow Distributed Learning in B.C., so the term 'home learners' was chosen for the purposes of this chapter. However, much literature still uses the term 'home schoolers', and therefore this paper keeps this terminology where it is used to maintain the original writers' integrity.
- ² Operationally, museums do not make a distinction for programs designed for distributed learners and traditional home schoolers; consequently, for this paper, all students participating in out of school learning are collectively referred to as 'home learners'.
- ³ Arguably, there is no 'best practices' in education because, using the lens of social constructivism, each individual learns and creates meaning differently based of their unique set of prior experiences.

REFERENCES

- Adams, M. (2005). *Optimizing homeschoolers' experiences in museums* (Unpublished master's thesis). Pleasant Hill, CA: School of Education and Liberal Arts, John F. Kennedy University. Retrieved from http://library2.jfku.edu/Museum_Studies/Optimizing_Homeschoolers.pdf
- Anderson, D., Kisiel, J., & Storksdieck, M. (2006). Understanding teachers' perspectives on field trips: Discovering common ground in three countries. *Curator: The Museum Journal*, 49(3), 365–386.
- Anderson, D., Storksdieck, M., & Spock, M. (2007). The long-term impacts of museum experiences. In J. Falk, L. Dierking, & S. Foutz (Eds.), *In principle, in practice – New perspectives on museums as learning institutions* (pp. 197–215). Lanham, MD: AltaMira Press.
- Angelis, K. L. (2008). *Homeschooling: Are partnerships possible?* (Unpublished doctoral dissertation). College Park, MD: University of Maryland.
- Arai, A. B. (2000). Reasons for home schooling in Canada. *Canadian Journal of Education/ Revue canadienne de l'éducation*, 25(3), 204–217.
- Barron, B. J., Schwartz, D. L., Vye, N. J., Moore, A., Petrosino, A., Zech, L., & Bransford, J. D. (1998). Doing with understanding: Lessons from research on problem-and project-based learning. *Journal of the Learning Sciences*, 7(3–4), 271–311.
- Basham, P., Merrifield, J., & Hepburn, C. (2007). Home schooling: From the extreme to the mainstream. *Studies in education policy* (2nd ed., pp. 3–24). Vancouver, BC: The Fraser Institute.
- British Columbia Ministry of Education. (2013). *Student statistics – 2012/13: Province – Public and independent schools combined*. Retrieved from http://www.bced.gov.bc.ca/reports/pdfs/student_stats/prov.pdf

- British Columbia Ministry of Education. (n.d.). *Distributed learning vs. homeschooling*. Retrieved from http://www.bced.gov.bc.ca/dist_learning/dl_vs_homeschool.htm
- Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research, 6*(1), 97–113.
- Choi, B. C., & Pak, A. W. (2005). A catalog of biases in questionnaires. *Preventing Chronic Disease, 2*(1), 1–13.
- Coughlin, P. K. (2010). Making field trips count: Collaborating for meaningful experiences. *The Social Studies, 101*, 200–210.
- Falk, J. H., & Dierking, L. D. (2000). *Learning from museums: Visitor experience and the making of meaning*. Lanham, MD: AltaMira Press.
- Farris, M. P., & Woodruff, S. A. (2000). The future of home schooling. *Peabody Journal of Education, 75*(1–2), 233–255.
- Fraser Institute. (2001). *Home schooling is an effective alternative to the public school system*. Retrieved from <http://www.fraserinstitute.org/publicationdisplay.aspx?id=12420&terms=Home+schooling+is+an+effective+alternative+to+the+public+school+system>
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277–1288.
- Iserberg, E. J. (2007). What have we learned about homeschooling? *Peabody Journal of Education, 82*(2–3), 387–409.
- Kreps, C. (2009). Indigenous curation, museums, and intangible culture heritage. In L. Smith & N. Akagawa (Eds.), *Intangible heritage* (pp. 193–208). London, UK: Routledge.
- Martin-Chang, S., Gould, O. N., & Meuse, R. E. (2011). The impact of schooling on academic achievement: Evidence from homeschooled and traditionally schooled students. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 43*(3), 195–202.
- Marton, F. (1981). Phenomenography: Describing conceptions of the world around us. *Instructional Science, 10*(1981), 177–200.
- Marton, F. (1986). Phenomenography: A research approach investigating different understandings of reality. *Journal of Thought, 21*(2), 28–49.
- May, E. (2013). *Northwest marine and aquatic educators*, Vancouver, BC. Retrieved July 16, 2013. From Plenary session.
- McIntosh, E. (n.d.). *Student directing their own learning* [Video file]. Retrieved from <http://www.edtalks.org/video/students-directing-their-own-learning#UeY5pI51JIA>
- MECHasisms. (n.d.). *Quantitative surveys: A short guide*. Retrieved from <http://mechanisms.energychange.info>
- Musco, M. (2011). *What do they want from us? Understanding the needs of homeschoolers in museums* [Powerpoint slides]. Retrieved from <http://www.slideshare.net/mmusco/homeschooling-and-museums>
- Noy, C. (2008). Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *International Journal of Social Research Methodology, 11*(4), 327–344.
- SelfDesign Learning Community. *Which program is right for you?* Retrieved from <http://selfdesign.org/k-12-learning-programs/which-program-is-right-for-you/>
- Simon, N. (2010). *Improving family exhibitions by co-creating with children* [Blog post]. Retrieved from <http://museumtwo.blogspot.ca/2010/12/improving-family-exhibitions-by-co.html>
- Stat Trek. (n.d.). *Bias in survey sampling*. Retrieved from <http://stattrek.com/survey-research/survey-bias.aspx?Tutorial=AP>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research*. Thousand Oaks, CA: Sage.
- Tran, L. (2007). Teaching science in museums: The pedagogy and goals of museum educators. *Science Education, 91*, 278–297.
- van Galen, J. A. (1988). Ideology, curriculum, and pedagogy in home education. *Education and Urban Society, 21*(1), 52–68.
- Wright, N. (2013). *Northwest marine and aquatic educators*, Vancouver, BC. Retrieved 15 July, 2013. From Plenary session.

Stephanie Chong
Coordinator, School Programs
Vancouver Aquarium Marine Science Centre
Vancouver, British Columbia