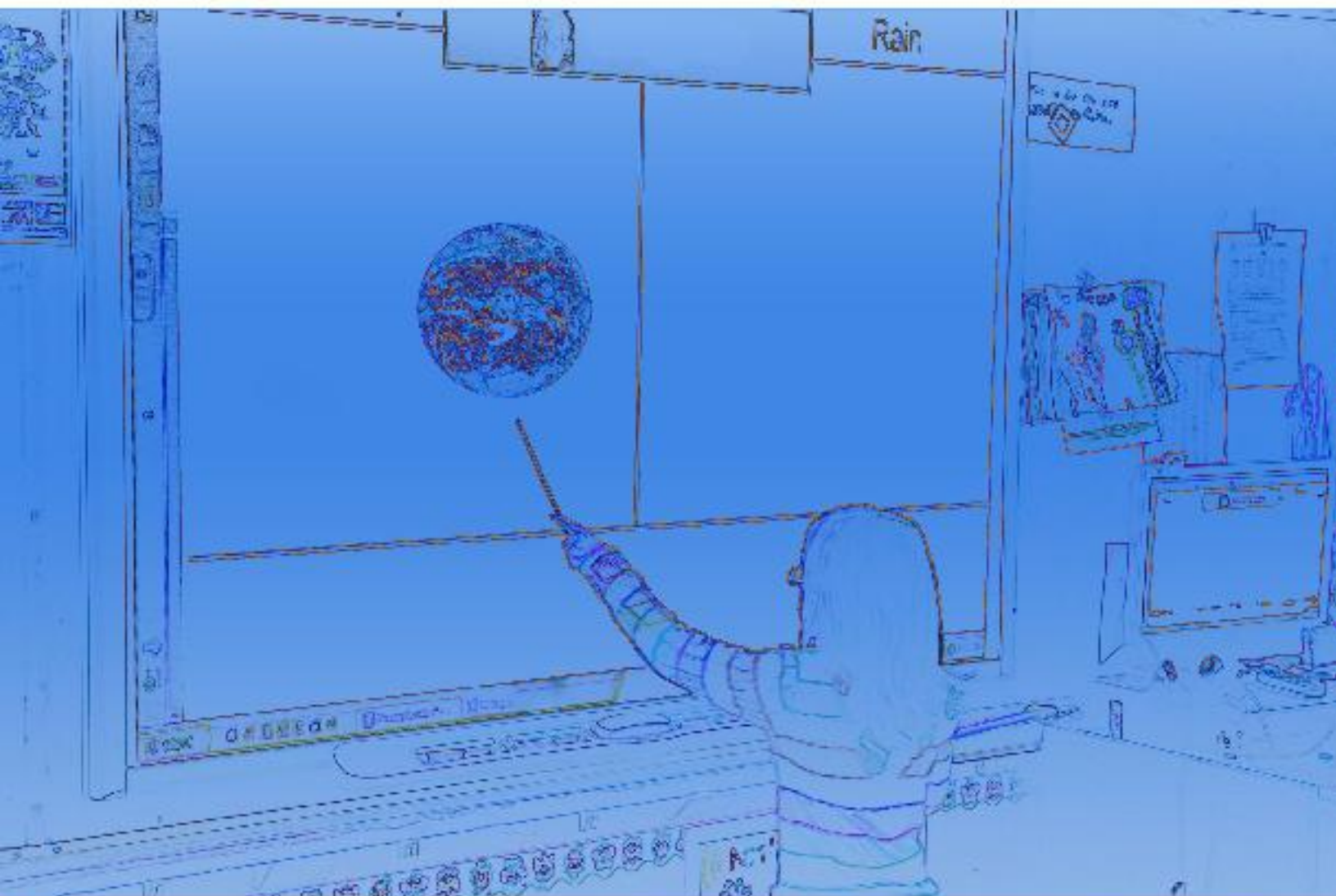


# LIVING AND LEARNING IN A SMARTBOARD WORLD



Livingstone Inquiry Group

# Living and Learning in a Smartboard World

**Written by the Livingstone Inquiry Group**

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# 1. LIVING AND LEARNING IN A SMARTBOARD WORLD

## Foreword

This book is about teaching and learning in elementary schools and follows the introduction, development and use of Smartboards; but it is more than a technology-focused text. It describes how the use of Smartboards is, for a number of teachers, changing both the way they think about and prepare for teaching and the ways that students engage in and enact their learning in classroom settings. The book also explores the emergence of a professional learning community called the “Livingstone Inquiry Group”. The various chapters reveal how this community – consisting of teachers from within and associated with Livingstone school, the school principal, and university and teacher union researchers – engaged in reflection in and on practice to build and extend individual and collective understandings of new and evolving approaches to pedagogy through the use of technology.

There are two sections to the book. The first consists of ten chapters written by the teachers and a school principal. The chapters are authored by Livingstone Elementary School teachers in East Vancouver, BC, Canada, and also some teachers from neighbouring schools who have joined the Livingstone Inquiry Group. The chapters include inquiries which incorporate Smartboards related to issues associated with early childhood engagement, the use of embedded video, Universal Design, addressing special needs, supporting writing, designing curriculum units, the use of document cameras, changing approaches to lesson planning, and the use of still and moving images. There are also chapters that examine the roles and practices of the school principal and librarian and how they nurture and contribute in significant ways to the teachers’ practices and inquiries. The teachers explore how the use of Smartboards improves student engagement in ways that sustain and foster the teachers’ passion for teaching. This has occurred when they see students’ needs being better met by the thoughtful use of technology incorporated into practices that are based on sound pedagogical principles and which include a range of student learning activities and assessment approaches. Technology, for the teachers featured in this book, is pervasive but it is only a tool, albeit used to optimum effect, to enable each and every child to participate in learning to the maximum extent possible.

The second section of the book focuses on various aspects related to the processes involved in creating and sustaining the Livingstone Inquiry Group. These chapters examine the nature of the learning community itself and the roles played by educators from the university and the teachers’ union in facilitating and analyzing different features of the inquiry and professional development process. These chapters focus upon a variety of issues such as the nature and value of teacher conversations in a learning community, and the nature and value of collaboration involving a teacher union researcher, university-based educators, and school-based educators in establishing an effective learning community.

The two central themes of the book are therefore about how teaching and learning has evolved and changed through using technology and how a learning community can provide a supportive forum for teachers' reflection and professional development. Without the learning community this book might not have been written, and without the focus on teaching and learning through the use of Smartboards the idea for this text might not have been arisen. We suggest that both themes should be considered by others wanting to explore innovation in practice, collaboration, and reflection, as we believe there is a case presented here for the simultaneous development of innovation and reflection in community.

The Livingstone Inquiry Group has been meeting regularly since 2007 and we have engaged in a number of professional development and research activities since that time. The membership of the Group has been extremely stable and the group members are (in alphabetical order): Steven Bartlett, David Brook, Laurie Cassie, Heidi Cyr, Tony Clarke, Gaalen Erickson, Alicia Hodak, Changyun Kang, Monica Lee, Brenda Lim-Fong, Suzanne McCarthy, Sharon Moy, Charlie Naylor, Rebecca Robins, Dorothy Watkins, Anthony Wong, Gina Wong, and Sylvia Zubke. Many of these participants have authored or co-authored chapters in the book, others have not been in a position to do so. We would like to thank Alicia Hodak for all the work she did in designing and laying out the cover for the book.

Collectively, we hope you enjoy this work, and that it is useful to you in thinking about teaching and learning, whatever your role. We welcome feedback and comments, and some of the key contact people for the project can be reached at the following addresses:

David Brook <[dbrook@vsb.bc.ca](mailto:dbrook@vsb.bc.ca)>, Charlie Naylor <[cnaylor@bctf.ca](mailto:cnaylor@bctf.ca)> or Gaalen Erickson <[gaalen.erickson@ubc.ca](mailto:gaalen.erickson@ubc.ca)>. If you are interested in professional development by this group for your teachers, please contact: Rebecca Robins <[rrobins@vsb.bc.ca](mailto:rrobins@vsb.bc.ca)>.

The Livingstone Inquiry Project itself as well as this book has received generous support from a number of sources and we would like to acknowledge their continuing support and assistance. The Vancouver School District has provided support to sustain the many professional development activities undertaken by the teachers in this project for teachers in other Vancouver schools and for teachers from school districts throughout British Columbia. The British Columbia Teachers Federation provided support under its programme of initiating teacher inquiry groups throughout the Province. Smart Technologies has provided on-going material and professional support to the teachers and their associated schools. The Centre for the Study of Teacher Education at the University of British Columbia has provided support for the project as well as for the publishing of this book. Finally, the project was part of a multi-country study focusing upon the creation and sustainability of 'Professional Learning Communities' which was funded by a research grant from the Social Science and Humanities Research Council of Canada.

# **PART I: TEACHING AND LEARNING PRACTICES WITH THE SMARTBOARD**

## **Chapter One**

### **DESIGNING DIGITAL UNITS THAT SUPPORT DIVERSE LEARNERS**

Rebecca Robins

*Livingstone Elementary School, Vancouver*

#### **INTRODUCTION**

The intent of this chapter is to investigate the structure and features I believe should be part of a digital unit plan. As a new user of Smartboard technology (SB), I lost some lesson activities that had been present when I taught in a paper/pencil classroom. I wanted my new classroom to still include interactive activities and support my students in applying higher level thinking skills. In collaboration with my colleagues and attention to what I consider to be good teaching, I now have a road map of sorts that I follow when creating a digital unit. It is my hope that teachers will be able to replicate the success my students' experience by following this process.

One morning as we were discussing the First World War one of my grade five students commented:

“Are you sure that all these things like fighting in the trenches are still connected to the Black Hand? I mean ... the assassination, of Franz Ferdinand and his wife, caused all this?”

This student was able to identify the cause and effect relationship that occurred at the beginning of the First World War. While clarifying her understanding, she was shaking her head in disbelief. After four weeks of lessons, this was the first time she shared her emotional response with the class and I was able to observe her deepening understanding. The structures and features of the First World War digital unit I created helped this student to understand the complex events that led to this global conflict.

This student reads about two years below her grade level. As a resource teacher, I support her and other students who struggle with reading and writing. This group includes students with weakness in their academic skills, English as a Second Language (ESL) students, or designated students with special needs. The First World War is typically not taught until high school and therefore most fiction and non-fiction books published are not written at my students' reading level. Teachers for the late-intermediate students at my school are selecting sophisticated topics through which to teach the language arts skills and I want to provide access for my struggling

students to the same topics that the more able, or perhaps book literate, students in the class are studying. Just because reading and writing is difficult, doesn't mean my students can't think critically. They simply need the information presented in multiple modalities (see chapter on Multimodal Features of IWBs). Well-designed digital unit plans utilize such modalities and help to increase my students' global knowledge so that they can become informed world citizens.

## **2. UNIT TITLE PAGE**

Because it reveals all the chapters in the unit, the title page is very carefully planned out. This page also functions as a portal with links to each chapter's first page. Instead of listing each chapter one underneath another, they form a web around our main topic. Each day, the lesson begins with the title page and even though we may not review the chapters, the students are reminded of what we have studied before and where we are going next.

When building the title page, I start with the background colour and sometimes a central image. As most of my units are built to share on the SMART Exchange lesson sharing website, I choose a neutral colour as the background. Sometimes the projector bulb will alter the original colour so it is important to check what the students will be viewing. I make sure the background colour allows the chapters to stand out. Most importantly I try to choose harmonious colours so that my students are not distracted by something like hot pink boxes on a neon yellow background. I think about colour so that my students won't. My original units had an image that was iconic or would generate discussions and questions as the central image but it is important to select something that is copyright free. For example, the First World War chapters are built around a field of poppies which was meant to prompt my students to think about what they already know about the topic.

Each chapter link is designed as a button with the name of the chapter and an image that can support the students who organize information visually. For example, the chapter on the 'alliances during WWI' has a square with the word 'alliances' underneath a handshake image. In the puberty unit, the chapter on staying healthy is illustrated with a bar of soap and deodorant. For the ESL students, I'm creating a miniature picture dictionary on the title page. The chapters are arranged in a chronological order following counter-clockwise after the first button. I know the students are thinking ahead to the next chapters because if I change the sequence, they are disappointed. They have said things like, "What about the 'Our Bodies' chapter? Are we going to study that next time?"

Finally, I use the title page to reinforce how graphic organizers work. Often my students are required to record the significant information from the chapter in a web format as we are learning the material. Then, one to two months later, without any group brainstorming, the students are required to recall and record all information they remember from previous chapters or even the whole unit by using a web format so that I can better understand their retention (see example in Laurie Cassie's chapter). I want the mechanics of webbing to be mastered by the students prior to the retention exercise. A limitation of the web design is that there is only space for a maximum of eight chapters on one page. With my First World War unit, there are about fourteen chapters in total. I believe the value of the web design as a chapter organizer, especially for students who struggle with literacy, outweighs a design with an expanded list of all chapters



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