

NOTE TO USERS

This reproduction is the best copy available.

UMI[®]

**Perceptions of the 2009
Impact of Curriculum Implementation on Teaching Practices of Social Studies 12
Teachers in Northwest Alberta**

Susan E. Mills

B.A. (Hons), University of Windsor, 1971
Dip. of Ed., University of Western Ontario, 1972

Thesis Submitted in Partial Fulfillment of
The Requirements for the Degree of
Master of Education
in
Multidisciplinary Leadership

University of Northern British Columbia

March 2010

© Susan Mills, 2010



Library and Archives
Canada

Published Heritage
Branch

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque et
Archives Canada

Direction du
Patrimoine de l'édition

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*
ISBN: 978-0-494-61139-5
Our file *Notre référence*
ISBN: 978-0-494-61139-5

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

Abstract

Initial teacher perceptions of the impact of the new Alberta Social Studies curriculum on teaching practices were examined. Social Studies teachers in Northwest Alberta were surveyed, quantitatively and qualitatively, about the use of critical thinking skills in their teaching practices before, and after, implementation of the Grade 12 curriculum. Quantitatively, no significant differences in teaching practices were found. Neither were there any differences in teaching practices found when teachers were differentiated by the variables of sex, total teaching experience, Social Studies teaching experience and department size. However, there were increases found in workshop attendance. Qualitatively, the results aligned with the literature related to teachers' concerns of time, resources, technology, collegial support, professional development, and classroom environment; only one exception related to teacher experience was found. School administrators, professional development planners, curriculum designers, and assessors of the implementation of new curricula would find this study of interest.

TABLE OF CONTENTS

Abstract		ii
Table of Contents		iii
List of Tables		v
List of Figures		vi
Introduction		1
Chapter One	Literature Review	7
	Investigative Questions	12
	Hypotheses	13
	Hypothesis 1	13
	Hypothesis 2	13
	Hypothesis 3	13
	Hypothesis 4	13
	Hypothesis 5	14
	Hypothesis 6	14
Chapter Two	Method	15
	Procedure Instruments	15
	Research Population	18
	Procedure	19
	Quantitative Data Analysis	20
	Qualitative Data Analysis	21
Chapter Three	Results	22
	Response Rates	22
	Quantitative Analysis	39
	Hypothesis 1	39
	Hypothesis 2	39
	Hypothesis 3	39
	Hypothesis 4	39
	Hypothesis 5	39
	Hypothesis 6	40
	Qualitative Analysis	40
Chapter Four	Discussion and Recommendations	46
	Limitations	46
	Discussion	48
	Qualitative Conclusions	55
	Recommendations	57

References		61
Appendix 1	Cover Letter and Consent Form Sent to Superintendents	64
Appendix 2	Cover Letter Requesting Teacher Participation in Research Study	67
Appendix 3	Survey #1 September 2008-2009 School Year	68
Appendix 4	Survey #2 December 2009 for 2009-2010 School Year	69
Appendix 5	Summary Table of <i>t</i> -tests	71
Appendix 6	Summary Table of ANOVA tests	78

Tables

Table 1	Groupings of Teachers to Show Median, Mean, Standard Deviation, and Range Values	23
Table 2	ANOVA and t-test Results for Critical Thinking Question Cluster and Multiple Approaches Question Cluster	68
Table 3	Paired Samples t-test Results for Pre and Post Survey Responses Collapsed Across Means	72
Table 4	Independent Variable of Sex for Survey 1 and Survey 2	73
Table 5	Independent Variable of Years of Total Teaching Experience	74
Table 6	Independent Variable of Years of Social Studies Teaching Experience	75
Table 7	Independent Variable of Size of Social Studies Department	76
Table 8	Independent Variable of Number of Critical Thinking Workshops Attended	77
Table 9	Results of 2x2 Repeated Measures ANOVA Tests	78

Figures

Figure 1 Means and standard deviations of pre and post survey responses	25
Figure 2 Means and standard deviations of pre and post survey responses by sex.	28
Figure 3 Means and standard deviations of pre and post survey responses by years of total teaching experience	30
Figure 4 Means and standard deviations of pre and post survey responses by years of Social Studies teaching experience	32
Figure 5 Means and standard deviations of pre and post survey responses by size of Social Studies department	34
Figure 6 Means and standard deviations of pre and post survey responses by number of critical thinking workshops attended.	36
Figure 7 Interaction of critical thinking workshops and NRLC workshop attendance	38

Perceptions of the 2009 Impact of Curriculum Implementation on
Teaching Practices of Social Studies 12 Teachers in Northwest Alberta

Social Studies educators face continual challenges in attempting to improve the knowledge and skills base that students require to become active, responsible, and globally aware citizens. Skill development historically has been an important component in the teaching of Social Studies. However, under the existing curriculum guidelines, students' efforts were focused more on knowledge and fact gathering rather than on the deliberate application of skills such as critical thinking. Responding to growing societal pressure to prepare students for a globalized society, Alberta Education personnel conducted a curriculum review leading to the development of a new critical thinking skill-based curriculum incorporating multiple perspectives such as those of Aboriginal peoples, Francophones, labour movements, and women's groups. The growing interdependence of nations fostered through globalization of trade links, communications, and technology led in part to Alberta Education curriculum committees (active teachers, consultants, and civil servants) including global citizenship and an awareness of global issues as important components of the new curriculum. Critical thinking based on a multiple perspectives approach was considered an appropriate avenue by which to foster global citizenship.

As part of the implementation of the new Social Studies curriculum for Grade 12 in Alberta, Alberta Education personnel, with Alberta Social Studies teachers' participation, conducted a pilot study within Grade 12 Social Studies classrooms for three school semesters. One goal of this project was for classroom teachers to use and assess new curricular resources designed to align with curriculum outcomes such as critical and creative thinking. Having a curriculum focused on development of critical thinking skills and

analyses might have required that teachers adapt their teaching practices to the stated curricular focus on critical and creative thinking skills, something the pilot study would have allowed these teachers to do. However, the majority of Alberta Social Studies teachers did not participate in the pilot project and were still expected to implement this new program of studies. How would these teachers perceive the new curriculum as impacting their teaching practices? This study was designed to investigate Northwest Alberta Grade 12 Social Studies teachers' perceptions of the initial impact of the new program of studies on their existing teaching practices through the instruments of quantitative surveys and qualitative open-ended questions.

In order to investigate this topic, the researcher conducted a review of how the new program of studies was created and existing literature on teaching practices connected to curricular reform was reviewed to consider how teaching practices could be impacted.

Teachers piloting the new program before the mandatory implementation in September, 2009, acquired personal experience by having had from one to three school semesters to adjust, adapt, and refine their teaching practices to align with the curricular focus of critical thinking skills development in students. However, if this Grade 12 program was to meet the desired curricular outcomes, teachers, if not using the inquiry process, might need to be willing to modify their perceptions of how the Social Studies curriculum should be taught. The new curriculum required the Social Studies teachers' utilize practices to support the stated goals and outcomes of the new program of studies. Based on the literature review and personal observations of teaching practices, it was determined that a research opportunity to study teacher perceptions of the impact of the new curriculum on teaching

practices existed, especially when the pressures of a government based Grade 12 diploma exam based on the revised curriculum was taken into account.

The pre-existing Grade 12 curriculum was taught in Alberta secondary schools until September, 2009, and teachers continued to use existing textbooks, unit plans, and assessment tools after that date. Social 30-1 was the advanced program while Social 30-2 was the standard program. Social 30 and Social 33 had been divided into two sections - the first was focused on politics and economics with the second built around the interaction of nations through conflict and cooperation from 1919 to present day - until the new curriculum came into effect. Social 30 was designated as advanced with Social 33 designated as standard. The Social 30-1 and 30-2 curriculum is focused on the origins and evolution of liberalism, the resulting challenges and reactions to those challenges by political and economic systems, and an investigation into perspectives on citizenship and global issues.

Alberta Education (2007) indicated that the new curriculum was to encourage the development of “active, informed and responsible citizens,” to encourage exploration of “local, national and global issues,” and to develop critical and creative thinking skills to allow for personal and group responses to issues. Alberta Education personnel created an inquiry-based curriculum designed to provide opportunities for students to develop these and other related skills such as historical thinking. Implementing a new program of studies meant teachers would need to design unit plans and assessment tools to meet curricular outcomes of key concepts included in the new curriculum. While some curriculum terms were understood, certain terms were defined to promote common understanding. Specific dimensions of thinking were intended to allow students to acquire and practice thinking strategies blending pre-existing and new knowledge together as needed. These dimensions

included critical, creative, historical, and geographic thinking, as well as decision making, problem solving, and metacognition. Each dimension was explained using the Alberta Education (2007) Social Studies program of studies as a framework in a manner that allowed for the goals to be presented and that included the potential implications for teaching practices.

The first dimension, critical thinking, referred to the development and assessment of ideas, processes, and experiences. The primary goal of critical thinking in Social Studies was stated as being the development of citizenship in a democratic setting. The development of critical thinking should allow students to increase their ability to determine reliability and accuracy of information sources. Furthermore, students, exposed to multiple points of view regarding an issue, were encouraged to better understand alternative perspectives and biases. Through the analysis of differing perspectives, biases, and alternative approaches, students were to develop skills to recognize connections, to present possible resolutions, and to present their findings in an informed and convincing manner.

The second dimension, creative thinking, referred to how students would propose possible ways of handling questions and issues that arose through the study of current and possibly controversial issues. This complemented critical thinking as students attempted to resolve issues or consider the possible outcomes of proposed solutions.

For the third dimension, students were to incorporate historical thinking into the inquiry process. Through historical reviews and comparative analyses, students were encouraged to go beyond the chronology of events and consider the possibility of alternative scenarios.

Students were encouraged to use the skill of metacognition or awareness of how conclusions are reached, to develop a personal understanding of different times and place. By exploring historic and current events from multiple perspectives, it was hoped that students would be willing to engage in a pluralistic society (multiple societal groups visibly present) based on democratic principles.

The fourth dimension was geographic thinking or the development of “spatial” awareness. Such skills would better provide students with the ability to understand global positioning of human interactions with each other and with the environment.

The fifth dimension was that of decision making and problem solving. Teacher practices were to provide students opportunities to consider differing approaches and resolutions of issues before making decisions. Students would be encouraged to look at alternative positions and perspectives and to examine the evidence before making conclusions about an issue. This problem solving approach would use metacognition as students determined research approaches and developed the ability to recognize that the problems may result from multiple causes and that proposed solutions may cause further complications. Students would practice the ability to present their informed position in oral and written formats.

These dimensions of thinking skills were intended to develop effective decision making skills to allow students to be active thinkers who could work in a collaborative fashion. Such developed skills ideally would be transferrable to situations outside of the Social Studies classroom.

To teachers, teaching activities were those activities designed to present curricular outcomes and to assess the students’ mastery of the course. Teacher practices included

aspects such as lectures, board notes, and worksheets, as well as various assessment tools such as multiple choice tests, position papers, and exams. These thinking skills were included in the previous curriculum but did not receive the same focus as in the new curriculum. Teachers working with the Social 30 and 33 courses had relied on the curriculum, textbooks, teacher resource manuals, government exams, and commercially produced study guides to create unit plans and assessment exemplars for use within their classrooms. Initially, at least, with the new Social 30-1 and 30-2 courses, the curriculum, the textbook, and teacher resource manuals were the main sources for teachers designing unit plans and assessment tools. The new exam format was made available to teachers through an Information Bulletin (Alberta Education, 2009) published online providing exemplars of written and multiple choice assessment pieces. However, the actual exam was not seen by Social Studies teachers across Alberta until the January, 2010, exams had been held.

To summarize, in Alberta, educators were often vital contributors in the testing of the applicability of new curricula. Within the new Grade 12 Social Studies curriculum, the emphasis was focused on the principles of liberalism and its role in the evolution of current societies. The teacher played an important role in developing lesson units designed to incorporate key components of the government program of studies. This research study was intended to investigate whether teachers perceived measureable changes in their views of the initial impact of the new curriculum on their teaching practices. The particular focus in this research project was related to the perceptions of the focus on critical thinking skills in teaching practices.

Chapter One

Literature Review

In Alberta, and globally, a trend towards critical thinking was evident. Case and Wright (1997) presented the historical trend towards critical thinking that has existed since the early twentieth century to show that the idea has only gained in relevance over time. The curricular focus and methodology of Social Studies faced continual pressures for relevancy from numerous sources including parents, think tanks, post-secondary institutions, and government review boards. Armstrong and Shutes (1981) presented the need for curricula that would reflect current societal expectations and requirements. Zevin and Corbin (1998) and Suárez-Orozco and Sattin (2007) discussed the need to develop curricula that could incorporate global interdependence and could provide students with key skills to assist them in competing in a globalized society. Kallen (1996) and Agnello (2007) also argued the need for course content that reflects essential skills for the labour market and for responsible citizenship as key components in any new program of studies developed. Patrick (1986) argued for a Social Studies curriculum centred on the development and practice of critical thinking skills transferable to other disciplines and to the general life practice of students. Wright (2003) indicated the importance of critical thinking skills to assess, debate, and understand issues arising within a democratic nation.

However, if curriculum change was to be successful, in an Australian study, Waugh and Godfrey (1993) asserted that the teaching staff must accept the proposed reforms. The concept of receptivity was an important factor if curricular reform were to be successfully implemented. These conclusions by Waugh and Godfrey (1993) were supported by the Belgian study of Sercu (2005) who also indicated that the attitudes and behaviour of teachers

and their reception of the proposed changes were vital in determining the success of the curriculum reform.

Another important component of implementation was the role of differing school policies and procedures under which the teachers were expected to work while implementing the reforms. Carson (2009) presented the change process being implemented in China and how the promotion of active student learning presented significant pedagogical and cultural challenges as teachers became less the director and more an informed facilitator of classroom learning activities. In a Norwegian study, Broadhead (2001) proposed that implementing curricular change required an integral role of teachers as part of the learning process, working to create an active and participative learning environment that promotes active student learning. One issue was whether the teachers moved away from dependence on textbooks as the curricular reformers hoped they would. Some of the challenges determined through this study included finding resources and equipment to facilitate active investigations by students, coordinating planning with department members, and coaching students to be more engaged in the active learning process. In a Turkish study, Kirkgöz (2008) discussed various aspects that impacted teacher perceptions such as the support provided, the time available, class size, and availability of resources. He also included a section focused on male and female teachers to expand awareness of actual teachers' perceptions of curricular change. Obviously, the coordination of curriculum reform and teacher development would need to be aligned with the actual working conditions within the classroom setting. More active learning activities provided through in-service sessions were seen as positive in providing teachers more opportunities to expand their teaching practices.

Akkus, Gunel and Hand (2007) investigated the challenges involved in shifting from teacher centred to student centred practices in Turkey. This fit in with an American study by Stodoksky and Grossman (2000) who discussed the factors that affect teachers' potential to adapt classroom practices to deal with curricular change. These authors indicated that curricular change was frequently influenced by teachers because they determine which instructional materials, lesson structure, and assessment approaches would actually be put into effect.

A key aspect was awareness of why teachers would fail to alter instructional practices. Teacher flexibility in dealing with change could influence how well a teacher would implement new curriculum demands. If teachers were to genuinely incorporate critical thinking practices into daily classroom activities, then lesson plans and possibly teaching practices would need to be reformulated. One aspect covered in this study was the value of departmental support – not always available to smaller school settings. Departments allowed for collegial interaction and for brainstorming of alternative approaches. If teachers were working in more isolated conditions, increased difficulties were experienced in attempting to create required changes mandated by new curriculum.

Keys (2005) presented an Australian study designed to consider if teacher practices affect implementation of new curriculum. There was a need to be aware of the position played by a teacher since teacher beliefs often transferred into teacher practices. If change was to be continued, then teachers must be convinced such change was necessary, that they could implement the changes, and that they can control the changes. Keys (2007) further postulated that how a teacher would respond to curriculum change required distinction between what is said and what is actually done. Such beliefs influenced their teaching

practices and how they then implemented required curricula. To successfully implement new curricula, recognition of existing teacher pedagogy, practices, and teaching experiences is required. In this Australian study, three approaches of “coaching, action research and communities of practice” (p. 43) were used to create change while still recognizing the need to create linkages between the teacher’s existing knowledge and the proposed changes. The point was made that teachers would either embrace, oppose, or alter proposed reforms dependent on their understanding of how their practices aligned with the proposed changes. In conclusion, the point was made that to change teacher practices, there must be provision made for teachers to reflect on the applicability of their teaching practices to the new curriculum.

Brown (2002) and Dicker (2001) incorporated the ideas of Keemis and McTaggart (1990) to show that teachers’ lesson preparation went through five stages: (a) planning, (b) implementation, (c) observation, (d) reflection, and (e) revision. Brown (2002) investigated how teachers’ perceptions of the role of such action research could impact teaching practices as part of professional staff development, while in Canada, Hubball and Burt (2004) presented the need for triangulation of programmes, planning, and assessment to create successful implementation of curriculum change, allowing opportunities for staff to align teaching practices to expected outcomes. Ha, Wong, Sum, and Chan (2008) focused on teacher willingness in Hong Kong to work towards curriculum reform. It was important to acknowledge the teachers’ roles as professionals in the classroom. Concepts of teacher subject background knowledge, collaborative planning, and networking were presented as important components of successful curriculum change. This study was used to demonstrate that teaching experience impacted teacher practices when facing new curricula. The authors

indicated that more experienced staff was more accepting of potential changes while the newer teachers felt more concerned about curricular reform, looking for collaboration and support. This was contradictory to the premise presented in the American study by Nicholson and Tracy (1982) that less experienced teachers were more adaptable to curriculum reform when compared to those with more experience. Confidence levels of teachers while implementing change was a factor also included in the Turkish study by Yilmaz (2009) in which it was concluded that teachers with higher confidence levels aligned with knowledge of subject content would be more accomplished in implementing curricular changes.

Teacher perceptions of reform might be affected by the accessibility of professional development in-service to assist them in applying the new curricular guidelines. Would teachers be willing to change teaching practices or would feel overwhelmed by the complexity of curricular change? Lee (2000) advised that in-service programs required active engagement by teachers as learners in order to best facilitate change. Currently, active teachers in Northwest Alberta are allowed a free membership in the Social Studies Specialist Council. Additionally, in Northwest Alberta, the Northwest Regional Learning Consortium (NRLC) provided hands-on workshop sessions on various topics, including those related to curricular implementation. However, not all teachers were able to attend such sessions due to time or cost factors. This resulted in some teachers having more exposure to modeled teaching practices than did others. The Alberta Education (2008) Learn Alberta web site also provided an online guide of sample unit plans for the critical challenges of the Social Studies courses. Still, for many teachers, the textbook and the teacher resource manual might have continued to provide basic structure for lesson plan and assessment tools development as the new courses were implemented.

Investigative Questions

Multiple questions were raised by the literature review. How would teachers perceive the impact of the new curriculum on their teaching practices? Would teacher practices be changed to incorporate opportunities for students to practice critical thinking skills? Would higher levels of teaching experience ease or hinder the transition of teachers from current teaching practices to those required to deliberately incorporate critical thinking to align with the new program of studies? Would other parameters such as sex, years of teaching experience, department size, or number of workshops attended affect the teacher perceptions of the impact of the curricular changes on teaching practices? If teachers lacked familiarity with the use of critical thinking processes as a teaching tool, would perceptions of the impact of the new curriculum on their teaching practices change to any significant degree? Would such teacher perceptions of the impact of such curricula on teaching practices be determinable through quantitative studies? Could any observable changes of teachers in northwest Alberta be compared to the results of studies conducted in Australia, Belgium, Canada, Hong Kong, Turkey, and the United States in which the authors indicated the importance of teacher practices in successful implementation of curricular change? These research studies focused on mixed methods and a similar design was developed for this research study. Since Saskatchewan Education (2007) listed expectations related to critical thinking that teachers were encouraged to include during unit preparation, these expectations were used to guide the development of the survey questionnaire questions that were used in this research study.

Several issues related to teacher practices and implementation of curriculum consistently appeared in the literature review. Operational definitions for this study were

designed to test the concept of these perceptions of teaching practices using the independent variables of sex, years of teaching experience, years of Social Studies teaching experience, size of the Social Studies department, and the number of critical thinking workshops attended by participating teachers. What was not known was if these same factors could be identified in the Alberta teaching population. It was decided for this study to test the perception of the impact of the new curriculum on teaching practices by a survey conducted pre-implementation (pre) of the Social 30-1 and 30-2 curricula and a secondary survey conducted post-implementation (post) of the new curricula comparing the quantitative survey responses to these specific variables.

Hypotheses

Six hypotheses were proposed to test teacher perceptions of the impact of the new curriculum on their teaching practices.

Hypothesis 1. Were there differences in teacher perceptions of the impact of the new curriculum on their teaching practices based on the Pre and Post Survey responses?

Hypothesis 2. Were there differences in teacher perceptions of the impact of the new curriculum on their teaching practices based on sex of the respondent?

Hypothesis 3. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of total years of teaching experience?

Hypothesis 4. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of years of Social Studies teaching experience?

Hypothesis 5. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on size of the Social Studies department?

Hypothesis 6. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of critical thinking workshops they attended?

Chapter Three

Method

This mixed methods study was designed to utilize quantitative and qualitative survey methods was designed to research if Grade 12 Social Studies teachers perceived that their teaching practices were being impacted by the implementation of the new curriculum. Survey responses were further sorted to determine evidence of demographic differences. A survey was designed to first determine perceptions of the pre-existing teacher practices with Social Studies 30 and 33 curricula. The same survey questions were then used to survey teacher perceptions after implementation of the Social Studies 30-1 and 30-2 curricula but before the students wrote the January, 2010 provincial government diploma exams based on the new curriculum.

Procedure Instruments

An initial general survey was used to determine teacher perceptions using a sample selected from the population of Social Studies teachers located within Northwest Alberta. The self-reporting survey questionnaires developed for this study were intended to assess teachers' perceptions of the extent to which they used various approaches of critical thinking to obtain curricular outcomes as outlined in the program of studies.

The survey questionnaires included a header section designed to gather background (demographic) information about the convenience sample. This information allowed for the screening of participants to determine their eligibility for the research study and to determine the groupings for quantitative analyses. The respondents were asked to indicate sex, age, total years of teaching experience, years of teaching Social Studies, if they had participated in the pilot project, the size of the Social Studies department within their schools, and the number

of critical thinking workshops they attended. These factors were the independent variables tested with the dependent variable (survey responses).

The questionnaires included 12 questions, with each response measured on a five point Likert-type scale (0 = never, 4 = always). Questions were adapted from the critical thinking recommendations as presented to teachers by Saskatchewan Education (Saskatchewan Education 2007) and referred to the use of: critical thinking vocabulary, demonstration of learning outside class, discussion and debate, bias analysis, supplemental materials, current issues, creation of qualified responses, assessment of news accuracy, multiple perspectives, differentiated presentations, access Alberta Education website, and attendance of (Northern Regional Learning Consortium (NRLC) workshops. First, in the quantitative portion of the study of teacher perceptions of their teaching practices were assessed by survey questions based on teacher perceptions of their teaching practices while working with the former program of studies (Social 30 and Social 33). Then the survey was redone based on teacher perceptions of their teaching practices while implementing the new program of studies (Social 30-1 and Social 30-2).

The second survey questionnaire also included a semi-structured interview component to allow for the gathering of qualitative data from teachers responding to open-ended questions. The teacher questionnaires and interview responses were used to provide data on the independent and dependent variables. This increased the reliability and validity of the research data while providing the researcher with answers to supplement and verify data results collected through the quantitative investigation.

Survey questions were tested with a convenience sample of six non-participatory Social Studies teachers. This provided personal experience conducting the test procedure and

an opportunity to improve the quality and relevancy of the questions before undertaking the actual research study. This process was incorporated to test the relevancy of the survey questions in the Alberta educational environment.

Then the research proposal was presented to my supervisory committee to confirm that the study would satisfy the degree research requirements. Further design improvements were incorporated into the final phrasing of questions and exemplars used in the surveys. The research proposal then was submitted for approval to superintendents of school jurisdictions located in Northwest Alberta (See Appendix 1). This step was necessary to obtain access to teachers working within those jurisdictions.

Once permission had been granted by those school boards, the proposal package was submitted to the UNBC Research Ethics Board (REB) for final approval. With REB permission received, the secondary school principals within each of the participating school districts were contacted to request permission to approach individual teachers within their schools. Through the contact with principals, information was provided about the schools which offered the new Grade 12 curriculum, the school teacher population numbers, and the names of teachers currently teaching the new Grade 12 curriculum. Survey packages could then be sent directly to the designated teachers. The survey package consisting of cover letters and consent forms for teachers (see Appendix 2) were distributed and the first survey questionnaire (see Appendix 3) inquiring into the teacher perceptions of the Social 30 and Social 33 curricula were included in the package.

Teachers who voluntarily participated were given no remuneration and were allowed to withdraw at any time. No audio or video taping of respondents was undertaken. Each survey package sent included a stamped, pre-addressed envelope, thereby providing

further confidentiality in the collection of the survey results. All surveys were mailed to participants at the same time.

Any information relating to teacher experience, school affiliation, and survey responses was kept confidential through the use of numeric codes assigned to each survey by an independent third party in the order received and then the survey data was compiled. Each survey permission letter was placed in a sealed envelope and filed separately from the questionnaire responses to further protect teacher confidentiality. Since individual teachers were known to the researcher, strict adherence to the university ethics policy and procedures was considered essential. In alignment with REB expectations, this research information was stored in a locked filing cabinet in the researcher's residence during the study. All survey response pages were scheduled to be shredded and any accompanying computer files cleared from computer memory storage once the research study was approved by the examination committee and avenues for publication explored. Once the study was approved, the results were to be shared with those superintendents who requested a copy of the research findings.

Due to the vacation time constraints and the dissimilar ethics board requirements of school districts within Alberta, it was determined that this study needed to be finalized with the time frame of September 2009 to December 2009. This reduced the number of school boards approached. Northwest Alberta was selected partly due to personal knowledge of teachers within the region, the geographic proximity, and the representative population across urban and rural school environments.

Research Population

The research population for this study was taken from a convenient sample within the population of those teachers teaching within the jurisdictions of the Grande Prairie Public

School District, the Fort Vermillion School District #52, the Grande Prairie & District Catholic Schools, the High Prairie School Division #48, the Northland School Division #61, the Peace River School Division, the Peace Wapiti School Division #76, the Holy Family Catholic Regional School Division #37, and the Northwest Francophone Education Region No.1.

Procedure

The first survey packages were distributed to Social Studies teachers within Northwest Alberta, in September, 2009 (see Appendix 2 and 3). The respondents to the first survey then became the sample for the second mail out of surveys in early December, 2009 (Appendix 4). Incorporated within the second round of the questionnaire was an open-ended self-report set of interview questions related to teacher perceptions of their attitudes towards the impact of the curriculum on their teaching practices. The December time frame was designed to allow teachers to have experienced opportunities to work with the new program of studies and to have gained some initial reactions before the January, 2010 provincial diploma exams.

The self-select sample responses of those participating were used to determine the eligibility of the teachers who agreed to participate. To increase the validity of the study, teachers who had piloted Social 30-1 or 30-2 were removed from the initial response sample group. Additionally, first year teachers lacking experience with Social 30 or 33 were excluded. The resulting sample then was asked to complete the second survey questions including the self-report, semi-structured interview component (Appendix 3).

The open-ended questions meant teachers could indicate in writing their willingness to change their teaching practices to support the new curriculum, if the new curriculum

would allow them to maintain their personal teaching practices, the elements and conditions supporting their efforts to implement new curriculum and, finally, the challenges and barriers experienced by them as a consequence of implementing the new curriculum in their classrooms. The addition of open-ended questions allowed teachers to provide input that was a vital contribution to the information collected in the research study. Written responses were compiled and coded for themes related to the issue addressed in each question.

All data collected were recorded in Excel 2007™ for statistical analysis purposes. Once the raw data were recorded, the completed surveys were stored in a sealed envelope placed in a locked filing cabinet within the researcher's residence to provide additional security and confidentiality for all teacher participants.

Before the statistical analysis was started, the data collected were reviewed to determine if any missing data values or discrepant values were entered. If survey data were missing or incomplete, the respondent was removed from the sample for statistical analyses purposes. This left a final quantitative sample of n=28.

Quantitative Data Analyses

The initial examination of the compiled data was completed using descriptive statistics. Subsequently, frequency analyses were conducted to determine the means, medians, modes and standard deviations of the survey data. Analyses were conducted with the use of Excel 2007™ available on the researcher's personal computer and with PASW 18™ available at the Grande Prairie Regional College computer lab facilities. The dependent variable was the scores from the Pre and Post surveys given to the teacher participants in the study. Graphs were created to visually assess independent variable data groupings of sex, years of teaching experience, years of social studies teaching experience, size of department,

and the number of critical thinking workshops attended. For each independent variable, the means for the survey responses were found and then collapsed across the independent variables. Additional analyses were conducted including paired sample t-tests on pre-post surveys results and the variables of sex, total years teaching experience, Social Studies teaching experience, department size, and critical thinking workshops attended. Two-Way Factorial repeated measures ANOVAs of pre and post responses crossed with the independent variables separated according to the medians of the specific independent variables were tested for main effects of pre-post and each between subject variables and for interactions. This allowed for pre-initialization, post-initialization of the new curriculum analysis for each question in the questionnaires in order to test the proposed hypotheses.

Qualitative Data Analysis

Qualitative analysis of each of the four semi-structured survey questions resulted in the compilation of responses for each question which were subsequently coded by themes. Teachers' comments were compared to qualitative studies from Australia, Canada, Hong Kong, Norway, Turkey, and the United States as presented in the literature review to determine if the factors identified by those studies were similar to those expressed by the participants in this study.

Chapter Four

Results

Response Rates

Within the nine school districts involved (see Appendix 1), the administrators of 37 secondary schools were contacted. Three schools did not respond to my request, resulting in a response rate of 92%. Principals of six schools reported that neither Social Studies 30-1 nor 30-2 were provided during the designated time frame. The school administrators provided the names of 44 teachers determined to be the sample of Grade 12 Social Studies teachers in Northwest Alberta. These teachers were sent a package that included the first survey cover letter, consent form, and the first survey questionnaire (see Appendix 2).

The response rate was 77.3% for the first round of surveys. The screening of these responses revealed three first year teachers who had not taught Social 30 or Social 33 and one who had piloted the Social Studies 30-1 program. These teachers were removed from the study group to increase validity of the sample, leaving 30 teacher respondents who became the convenient representative sample. The second survey questionnaires were distributed to these teachers by mail in early December, 2009.

The response rate for the second set of completed and returned surveys was 100%. When these were screened for incomplete data, two surveys were removed for discrepancies or missing data from the sample subset. This left a sample of $n = 28$ teachers for quantitative analysis purposes.

First, it was determined that within the sample the 12 survey questions had been completed by the same teacher on the pre and post surveys. Then, background data were compiled from the survey's demographic sections (see Table 1). Teachers were grouped by

sex, age, years of teaching experience, years of teaching experience in Social Studies, and by the number of critical thinking workshop attended. This was done for both the September and December surveys. The following table shows medians, means, standard deviations, and ranges of demographics provided by the teachers.

Table 1

Groupings of Teachers to Show Median, Mean, Standard Deviation, and Range Values of Demographic Sections

Teacher Grouping Variables	Median	Mean	Std Dev	Range
Sex				21 males 7 females
Age				27-69
Years of Total Teaching Experience	12	14.6	10.4	1-37
Years of Teaching Social Studies	10.5	13.3	9.8	1-37
Social Studies Department Size	4	4.3	2.3	1-8
Number of Critical Thinking Workshops Attended	5	6.9	6.4	1-35

The mean age of teachers was determined to be 42 years. However, years of teacher experience did not always correlate with age as some less experienced teachers had begun their teaching careers later in life. Therefore, age would not be used as a variable in further analyses. The median values determined for these groups were used for the separation of respondents into treatment groups for statistical analyses.

Each of the 12 survey questions was analyzed initially to calculate the means and standard deviations for each question. Then the means and standard deviations were collapsed across Surveys 1 and 2 and graphed to allow for visual assessment of the survey responses (see Figure 1).

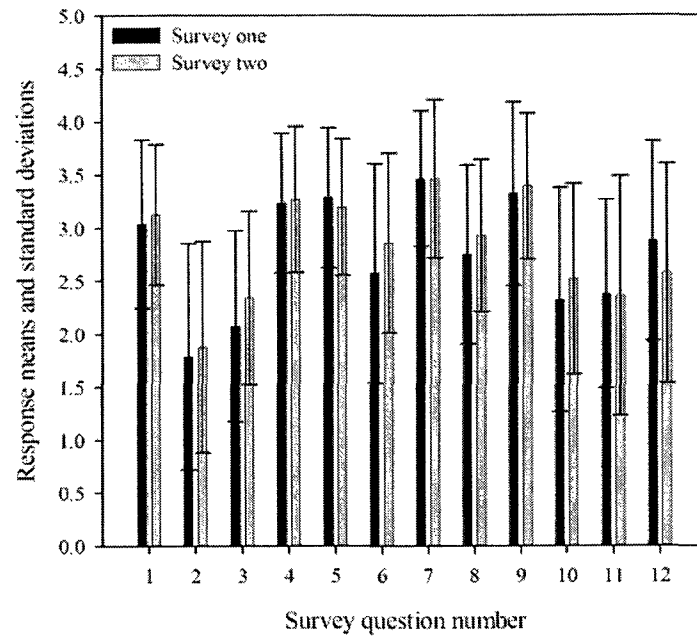


Figure 1: Means and standard deviations of pre and post survey responses

For Question 3 (frequency of discussions, debates), Question 6 (investigation of current issues), and Question 10 (differentiated assessment activities) it appeared that in Survey 2 higher means recorded than in Survey 1. This implied that teachers were more likely to use debates, current issues, or differentiation than in Survey 1. For Question 12 (attendance at NRLC workshops) the means of Survey 1 appeared to be slightly higher than those of Survey 2. This implied that, when all respondents were grouped together, teachers were less likely to attend workshops than before implementation. Question 12 (attendance at NRLC workshops) appeared to have the greatest variability between the mean for Survey 1 when visually compared to the mean for Survey 2. However, when the standard deviations were taken into account, the means fell within the standard deviations for each question and no apparent differences were seen.

A factor analysis was conducted on the survey questions and seemed to identify two clusters. Question 1 (vocabulary), Question 3 (discussions, debates), Question 4 (analyze for bias), and Question 5 (alternative perspectives) all exhibited components of critical thinking, and Question 6 (multiple solutions), Question 7 (support position), Question 8 (new sources), Question 9 (multiple perspectives), and Question 10 (differentiated assessment) all exhibited elements of assessment of multiple approaches). The means of each cluster were determined and analyzed through *t*-tests and 2x2 ANOVAs for each independent variable. To facilitate data analysis purposes, Survey 2 Questions 1-12 were renumbered as Questions 13-24. This renumbering process was used for each set of *t*-tests and ANOVAs conducted throughout this study. No significant differences were seen by clustering these sets of questions (see Table 2).

To determine if any significant differences did exist when considering each question independently, inferential statistics were conducted using the paired sample *t*-tests in Excel 2007™ and in PASW 18™ based on the means collapsed across the surveys for each paired set of questions (See Table 3). The questions of Survey 1 and Survey 2 were tested with *p* set at .05 with significant differences shown with *p*=.03 for Question 12 (NRLC workshops) only between Survey 1 and Survey 2 (see Table 3). Nothing else was seen to show significant differences between Survey 1 and Survey 2. It was decided to look further at each independent variable.

In Figure 2, the graph was used to display the means and standard deviations grouped by sex collapsed across Survey 1 and Survey 2. There were 21 males and 7 females grouped by sex. Question 2 (learning outside classroom) appeared to indicate higher male response means, while Question 12 (attendance at NRLC workshops), seemed to indicate a higher female response mean. These implied males were more likely to use learning from outside the classroom while females were more likely to attend workshops. To determine if any significant differences did exist, inferential statistics were completed using the paired sample *t*-tests based on the means collapsed across the surveys by the variable sex for each paired set of questions. Welch Two Sample *t*-tests were conducted on each set of survey responses when the independent variable of sex was applied (see Table 4). For Survey 2 by sex, for Question 2 (learning outside classroom), *p* =.04 while in Survey 1 by sex, for Question 12 (NRLC workshops) *p* =.01. However, when ANOVAs were conducted no main effects or interactions were seen for the independent variable sex (see Table 9).

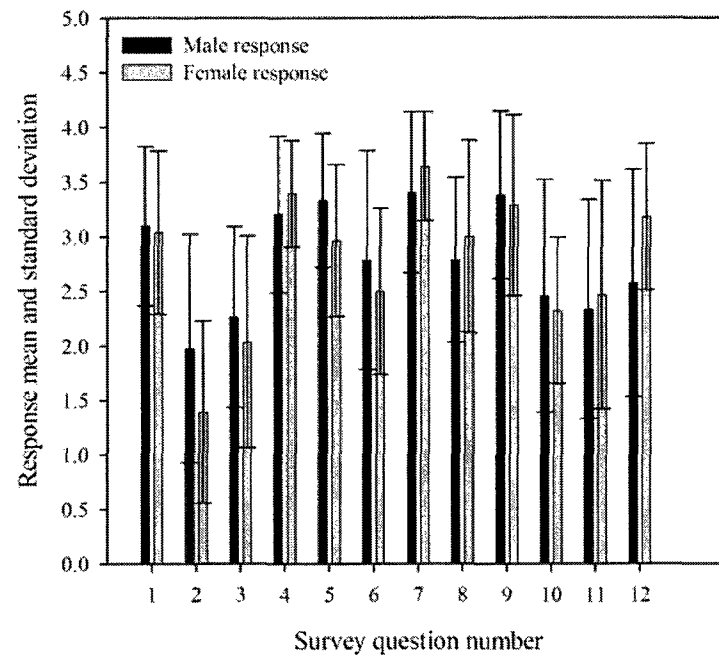


Figure 2: Means and standard deviations of pre and post survey responses by sex

In Figure 3, the graph was used to show the means and standard deviations of total teaching experience collapsed across Survey 1 and Survey 2. The median was 12 years of experience. With the means for years of total experience split at the median, Question 2 (learning outside classroom), 3 (discussions, debates) and 8 (analyze news sources) appeared to have higher means for the 12 or fewer years of experience group. This implied that teachers with less experience were more likely to incorporate learning outside classroom, discussions, debates, and analysis of news sources. Welch Two Sample *t*-tests were conducted on each set of survey responses using the independent variable of years of total teaching experience. Question 2 (learning outside classroom) was significant with $p=.05$ (see Table 5). However, when 2x2 ANOVAs were conducted to test for main effect and interactions, no significant results were seen.

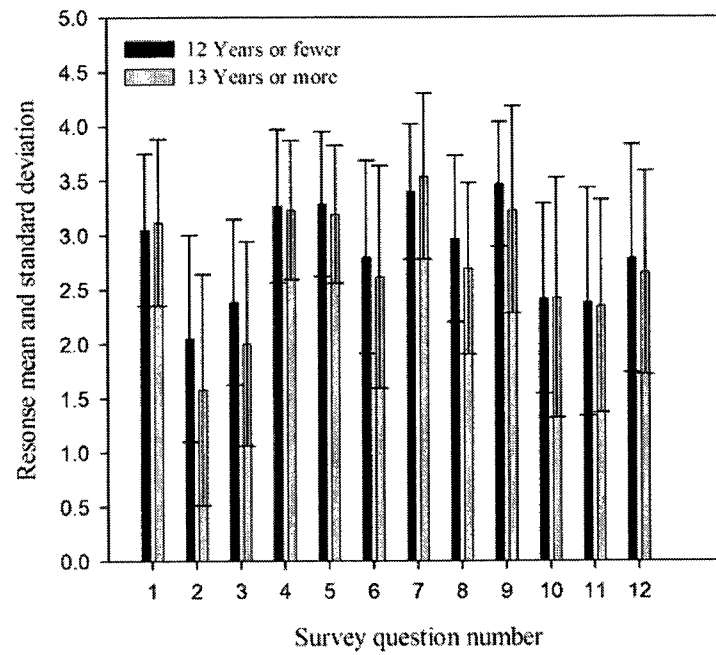


Figure 3: Means and standard deviations of pre and post survey responses by years of total teaching experience

In Figure 4, the means and standard deviations of the years of Social Studies teaching experience were collapsed across Survey 1 and Survey 2. The median value was 10.5 years with a mean of 13.3 years. Teachers were divided into groups at the median. For Question 2 (learning outside classroom) and Question 3 (discussions, debates) the 10 or fewer years seemed to have higher means than those with 10 or more years. This implied that the teachers with less experience were more likely to use learning outside classroom, discussions, and debates. Welch Two Sample t tests were completed (see Table 6) and Question 2 (learning outside classroom) for Survey 2 approached significance with $p = .05$. When 2x2 ANOVAs were done, no main effects or interactions were noted (see Table 9).

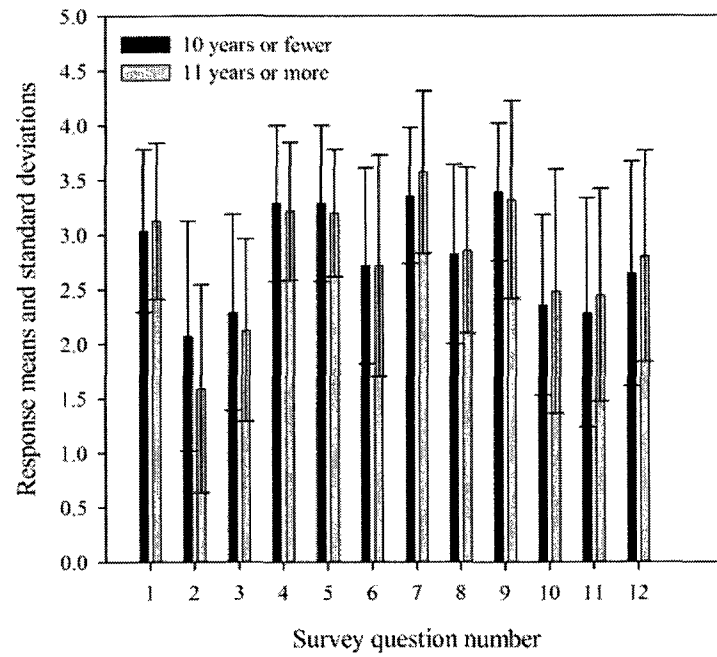


Figure 4: Means and standard deviations of pre and post survey responses by years of Social Studies teaching experience

In Figure 5, the graph was used to display the means and standard deviations of the size of department collapsed across Survey 1 and Survey 2. The median was 4 teachers. Question 2 (learning outside classroom), Question 4 (analyze sources), and Question 9 (multiple perspectives) appeared to have reported means as higher than those with department sizes below the median. Question 7 (support statements) appeared to have reported means as higher than those with department sizes above the median (See Figure 6). This implied that teachers in smaller departments were more likely to use learning outside classroom, analysis of sources, and use multiple perspectives. However, teachers in larger departments appeared to be more likely to incorporate working with support statements. Welch Two Sample *t*-tests were conducted with no significant differences noted (see Table 7). When 2x2 ANOVAs were done, no main effects or interactions were noted (see Table 9).

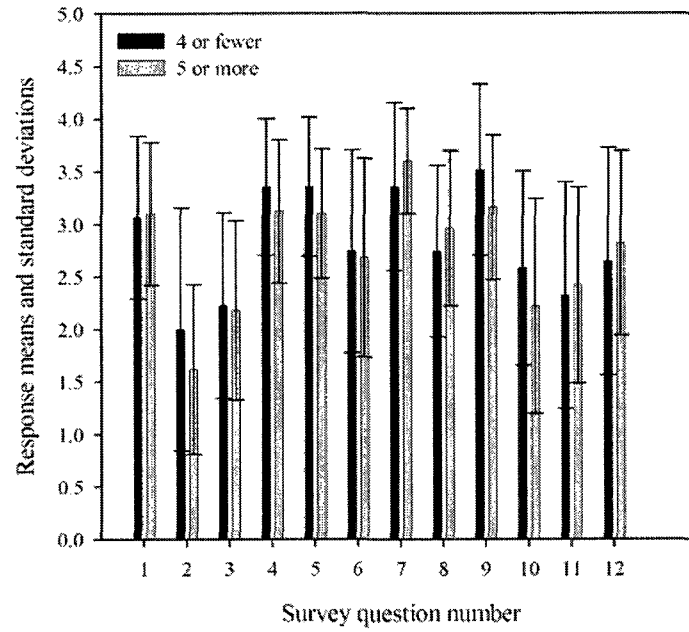


Figure 5: Means and standard deviations of pre and post survey responses by size of Social Studies department

In Figure 6, the means and standard deviations of critical thinking workshops attended were collapsed across Survey 1 and Survey 2. The median was 5 critical thinking workshops. For Questions 9 (multiple perspectives) and Question 12 (NRLC workshops) the group above the median seemed to have higher means than those below the median number of workshops. This implied that teachers who attended more workshops were more likely to use multiple perspectives.

Welch Two Sample *t*-tests were conducted and Question 12 (number of workshops) showed significance with $p < .01$ for Survey 1 and $p < .01$ for Survey 2 (see Table 8). When the 2x2 ANOVA was completed for Question 12 for workshops, significant differences were determined to have existed.

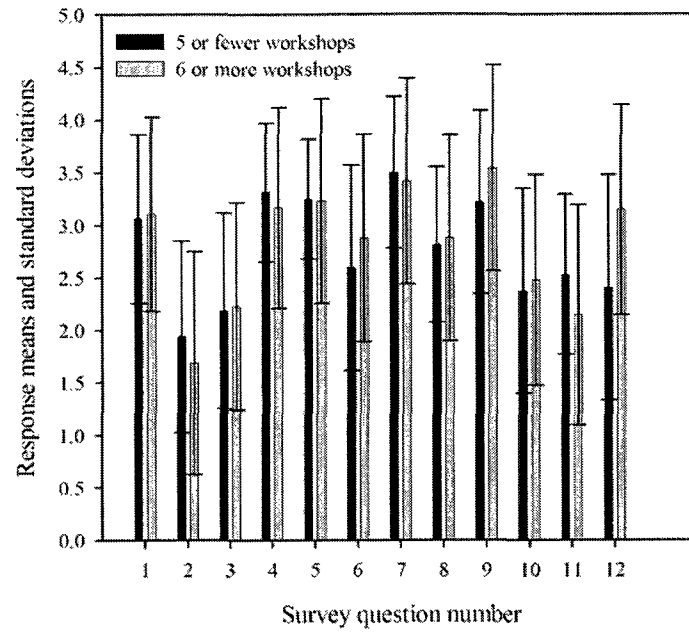


Figure 6: Means and standard deviations of pre and post survey responses by number of critical thinking workshops attended.

First, a significant main effect (within pre-post survey means) was seen in the number of NRLC workshops attended with $F(1, 27) = 6.732, p = .02$ (see Table 9). The null hypothesis is rejected. Second, there was a lack of main effect seen between those who had attended many or few workshops in the past, with $F(1, 27) = .01, p = .93$; no significant difference was seen between pre-and post-survey means. Finally, there was determined to have been an interaction with $F(1, 27) = 4.84, p = .04$; those who had attended more workshops scored higher than those who had attended fewer workshops. There was a significant interaction in that those who had attended fewer workshops showed a greater increase in workshop attendance than those who had previously attended more workshops.

To determine the data values for the interaction graphs, the means of those grouped as 5 or fewer workshops and for the 6 or more workshops group were collapsed across the pre-test scores and the post-test scores. The Pre-Test (Survey 1) means for 5 or fewer workshops was 2.70 and 2.83 for 6 or more workshops. The Survey 2 results for Post-Test (Survey 2) means was 2.83 for 5 or fewer and 2.82 for 6 or more workshops attended.

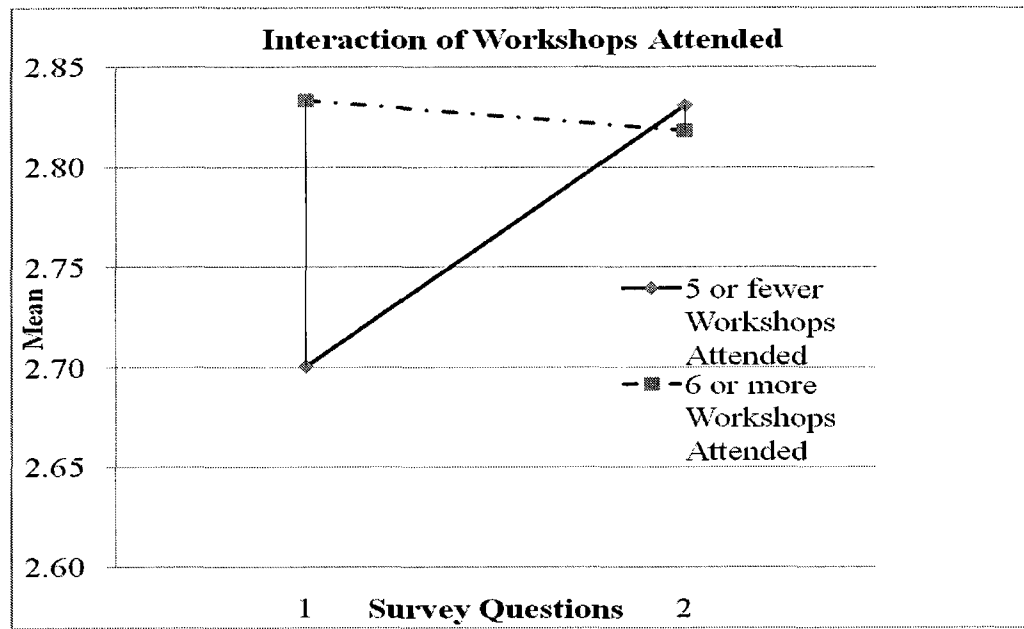


Figure 7: Interaction of critical thinking workshops and NRLC workshop attendance

Quantitative Analysis

The operational definition of this study was to determine if teachers perceived any changes in their teaching practices due to the new Social Studies curriculum. Six hypotheses were proposed and answered to test teacher perceptions of the impact of the new curriculum on their teaching practices.

Hypothesis 1. Were there differences in teacher perceptions of the impact of the new curriculum on their teaching practices based on the Pre and Post Survey responses? When the survey means were graphed and *t*-tests conducted, there were no significant differences between teacher means for Survey 1 (Pre) and Survey 2 (Post).

Hypothesis 2. Were there differences in teacher perceptions of the impact of the new curriculum on their teaching practices based on sex of the respondent? When the survey means were compared through *t*-tests and through ANOVAs, there were no significant differences seen.

Hypothesis 3. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of total years of teaching experience? When the survey means were compared through *t*-tests and through ANOVAs, there were no significant differences.

Hypothesis 4. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of years of Social Studies teaching experience? When the means were compared through *t*-tests and through ANOVAs, there were no significant differences.

Hypothesis 5. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on size of the Social Studies department?

When the means were compared through *t*-tests and through ANOVAs, there were no significant differences.

Hypothesis 6. Were there differences in the teacher perceptions of the impact of the new curriculum on their teaching practices based on the number of critical thinking workshops they attended? There were no significant differences seen in Question 1 to Question 11. In the ANOVA test results, Question 12 had significant differences determined to have existed when the pre- and post-survey responses were compared for Survey 1 (Q12) and to Survey 2 (Q24). The statistical evidence showed that there was a main effect of the pre-post within subjects as the means of 6 or greater workshops group increased the largest amount. Those who attended workshops continued to do so. The frequency of attendance at NRLC workshops compared with the number of critical thinking workshops attended created an interaction as seen in Figure 9. Those who had attended fewer workshops felt it worthwhile to attend more workshops. However, one needs to keep in mind the sample size, $n=28$, and realize that generalizations cannot be extrapolated to the entire Social Studies teaching population based on this result.

Qualitative Analysis

Further to the quantitative data that were acquired in the study, the second component of the research study was focused on the qualitative variables addressed through the open ended interview questions. The qualitative data were acquired through the 30 responses provided to the questions included with Survey #2 (Appendix 4). One respondent did not address this section of the survey, resulting in a response rate overall of $n=29$ (97%).

The use of the qualitative responses allowed this researcher to capture elements of teacher practices not revealed in the quantitative data analyses. Responses were reviewed

before being compiled and coded by themes that would be supported by references made through the use of direct quotes.

With the first survey question teachers were asked “How would you describe your willingness to change your teaching practices to align with the new curriculum?” Three teachers (10.4%) reported they “*don’t really know the old [curriculum]*” and “*As a new teacher I have tried very hard to teach in the new methods.*” However, 22 teachers (75.8%) indicated their willingness to change their teaching practices, for example, “*I am very willing*” to “*I feel that I am open to new ideas, techniques.*” Others indicated that “*As a professional, I do everything I can*” and “*My teaching style matches well with the new curriculum.*”

In contrast to this, not all teachers were as enthusiastic about changing their teaching practices. The more experienced teachers appeared to be less enthusiastic than the new teachers. Four teachers (14.3%) expressed less willingness as indicated by comments such as “*to some degree – nowhere near what they would prefer,*” while another indicated that “*It’s a challenge. I do feel the new P.of S. [Program of Studies] to be a difficult paradigm shift,*” or “*some hesitation,*” and finally, that “*It’s been a bit of a struggle.*”

The second question asked participating teachers, “Does the new curriculum allow you to maintain your personal teaching practices? Explain.” Common response themes to this question indicated how teachers saw their own teaching practices aligned with the new curriculum and how the new course allowed them to focus more or less on their own individual style of teaching.

For the second question, 23 teachers (82.1%) indicated that they were able to maintain their personal teaching practices, as shown in statements such as “*The new*

curriculum ties in better to my teaching practices than the old curriculum did” and *“Yes. – I have always taught the Inquiry Process. Also – Soc 30-1 is a course that follows my personal interests.”* Teachers did include qualifiers when explaining their reflective reasoning, *“I have had to change my teaching practice from the past (linear approach)”* and *“Yes, I make it so. I am the ‘sage on the stage’ ...I can also be a ‘guide on the side’ but I am a very interventionist one.”* Two teachers (6.8%) focused on specific aspects such as current events, for example, *“More or less. I still talk a lot about current events for example, and some skills like essay-writing don’t go away.”* Willingness to shift teaching practices to align with the new curriculum was identified by comments such as *“Yes. I could continue to do my regular teaching practices but I am more interested in incorporating new methods and technology,”* *“Yes in many ways, but I find the conversation is very different (thematic and skill based) rather than fact driven”* and, *“Yes. In fact, the new curriculum has helped me to improve my teaching methodology and gain a better understanding of critical thinking.”* Finally, participants stated *“Very much so. The new curriculum is much more congruent with my personal teaching methods and ideologies ... Not only has it maintained my teaching practices but has allowed for great development of such practices.”*

Not all were as enthusiastic. One participant said *“Somewhat. I taught critical thinking before, but now the curriculum is much more interactive. More student directed lessons rather than teacher directed lecture style as the old curriculum supported.”* Only one teacher qualified the response with a reference to diploma exams, stating that *“At times. We spend many hours teaching techniques for the 30-1 30-2 exam. This stifles teachers.”*

The third question asked survey respondents to reply to “What elements and conditions support your efforts to implement the new curriculum?” Responses to this

question indicated that technology played a pivotal role when used on one's own and when used in conjunction with resource materials and in-service opportunities.

Three teachers (10.4%) did not respond to this question. Specific mention was made of the value of web based sites such as Wiki, Moodle, and SharePoint in providing teachers opportunities to make contact and share resources with other teachers within the field. The use of technology in presenting course content was a common theme with Smart Boards, student laptops, and online resources such as Learn Alberta and YouTube indicated as technology supporting teacher efforts to implement the new curriculum. *"Technology in the classroom, Smart Board & (YouTube)/internet access as well as laptops for students to use"* and by *"Being young I use technology all the time and the resources available online are wonderful. Not a class goes by where I am either learning from someone else's work or using it for my class Ex [learn Alberta, wiki, moodle]."*

Resource materials were linked with technology by teachers including the text books and internet resources such as in *"New texts – critical challenges on the learn alberta website +NRLC Social Studies Pb wiki."*

Workshops were a frequent component of responses with nine teachers (31%) referencing the role of NRLC in providing opportunities for in-service such as *"N.R.L.C. 'roll up your sleeves' sessions. Cohorts + collaboration are certainly the best way to support teachers."* Twelve teachers (42.9%) mentioned contact with colleagues and departmental collaboration such as stated in *"Access to PD and collaboration with other SH [Senior High] Social teachers both to share resources and ideas with respect to implementation"* and *"We have been fortunate to have a strong cohort that has allowed for collaboration through a number of school districts. This is unseen or unheard of in many different locals."*

The fourth question asked teachers to respond to “What challenges and barriers inhibit your efforts to implement the new curriculum?” Themes found in the answers provided by teachers ranged from the issues of resources, technology, time constraints, classroom environment and professional development support.

In comments related to resources, four teachers (13.7%) referred to the textbook as in *“Textbooks are disorganized and incoherent”* and *“The ‘circular’ layout of the text content is frustrating and annoying to many students (discussion of the same incident at three different points in the text, for example.”*

Technology was mentioned by six teachers (20.7%) as inhibiting teacher efforts. Furthermore, teachers indicated the need for technology training and support such as in use of Smart Boards. Web-based lesson format was found to be challenging by teachers when the computers’ unreliability made it a hassle to rearrange lessons, as shown in *“The new technology has been very challenging even overwhelming and I am not alone thinking that more help would be appreciated”* and *“Technology and using it. Moving into smart board and all that it encompasses – using it to get clips etc.”* Another stated that *“Technology, or lack of it, in schools has been a challenge in implenting the curriculum. There just isn’t enough of it to go around.”*

Time constraints were presented by eight teachers (28.6%) of respondents as a significant challenge ranging from statements such as *“The biggest hindrance to implementation of the new curriculum is the amount of time that it takes to develop unit plans, teaching resources, and now especially test materials”* and *“It is difficult...with the limited amount of time to go through sources, create good MC questions, collaborate with other teachers, create well-designed lessons, marking, etc.”* Another teacher indicated

“specifically time to create new assessment pieces needed to implement the new curriculum” and *“The making of exams to the curriculum’s specifications is backbreaking and consumes ludicrous amounts of time.”* Finally, one teacher indicated that *“teaching other subjects – Social Studies is only part of my assignment”* was a factor that should not be ignored.

The classroom environment included the role of students such as in *“students need to become more competent using inquiry based thinking”* while further references were made to *“student resistance - they just want the info, assignments and that’s it. I find it very difficult to get them to take alternative assignments seriously. They really resist current affairs.”* Several teachers referred to *“students poor work ethic and attendance”* and *“students prefer to be passive and are reluctant to take active participation in their own learning”* as challenges and barriers to implementation of the new curriculum.

Lastly, teachers referenced the need for more in-service and professional development support. Lack of funding meant that *“We do not have enough subs nor money to allow me to attend the cohort this year.”* and *“lack of funding or an unwillingness of the part of schools + boards to support teacher-driven P.D., specifically time to create new assessment pieces”* as important challenges and barriers to implementing the new curriculum.

In summary, the teachers were candid in their comments as expressed in the interview questions. They clearly indicated their willingness to change teaching practices to align with the new curriculum. They also identified the need for a continued support base related to technology, professional development workshops, communication with other Social Studies teachers, and preparation time.

Chapter 5

Discussion and Recommendations

This mixed methods research study was designed as an initial exploration into the teacher perceptions of the impact on their teaching practices of the implementation of the new Grade 12 Social Studies curriculum. The teachers' willingness to support the concept of this research study was shown by the high return rate on the first and second surveys and for the voluntary open-ended interview questions.

Overall, the quantitative studies provided limited information about the variables addressed in this study. There were no significant differences found for the pre-post survey results for sex, total years teaching experience, years of Social Studies teaching experience, or for size of department. The results found indicated that teachers saw value in not only attending, but in continuing to attend workshops that they felt to be of assistance in their teaching practices. Qualitatively, the teachers expressed definite willingness to work towards the curricular outcomes of the new program of studies. However, teachers also expressed that there were certain factors that would assist or impede the rate at which such implementation occurred. For example, the concept of technology was seen as useful tool but also as an area in which further attention and consideration would be necessary.

Limitations

One constraint was the time frame of this research study. Teachers could not be surveyed until permission was received from the Research Ethics Board. This first required that all the school boards approached had provided their decision regarding participation in this study. The process was further delayed by summer vacations and personnel changes within the school boards. Some survey permission requests had to be resubmitted and some

schools contacted by email and phone in order to obtain permission and the names of schools and teachers available for the study. Ideally the initial survey would have been completed in August, 2009, before implementation of the Social 30-1 and 30-2 courses. However, the delays meant the surveys were sent out in September, 2009.

As a result, the initial survey requests based on the old Social 30 and 33 curricula were being presented to teachers in the busy month of September while teachers were trying to implement the new Social 30-1 and 30-2 program of studies. Teachers were re-surveyed in December, 2009 to determine their initial impressions of the impact of the new curriculum on their teaching practices. While some surveys were returned in early January, all surveys were received in advance of students writing the first province-wide diploma exams based on the new program of studies. This provided assurance that teacher responses were not biased by exam results.

A second limitation due to the time frame meant that this study was confined to a restricted group of teachers. Due to teacher availability and the time restraints, a convenient sample from Northwest Alberta was used which made it problematic to determine generalizations about the rest of the Social Studies teacher population within the province of Alberta.

A third limitation was the participants' willingness to respond to the questionnaires and the survey questions. The structure of the questionnaires may have unintentionally placed restrictions on the participants' responses as there was no provision provided for respondents to add comments to the quantitative questions.

Finally, not using personal interviews resulted in constraints in determining teacher responses to the open ended questions as there were no opportunities provided to allow for further explanation of details in the answers provided by respondents.

Discussion

It was expected that through the coding of themes similar results to the other qualitative studies would appear. Waugh and Godfrey (1993), in an Australian study, stated that the concept of “receptivity” was an important factor if curricular reform was to be successfully implemented. From the first interview question responses, it was evident that the teachers were receptive to the new program as 75.8% of the teachers indicated their willingness to make the required changes to implement the new curriculum, while only 10.4% recorded reservations about doing so. Teachers would require time to make any changes deemed necessary as the implementation of the new curriculum continued to occur. As there seemed to be no significant differences between the male and female willingness to implement the changes required, no further distinction by sex between responses was made.

One assumption presented was that Social Studies teachers’ perceptions would not differ significantly as teachers attempted to incorporate the new curriculum outcomes into their teaching practices. If teachers did not see significant differences in course content between the old curriculum and the new curriculum, they would not feel the need to drastically modify their teaching practices. However, this did not necessarily mean that the existing teaching practices did not align with the new program of studies. Consider “*I have continued to have class discussions and cartoon analysis that I had used previous to this new curriculum*” and “*Somewhat. I taught critical thinking before, but now the curriculum is much more interactive. More student directed lessons now rather than teacher directed*”

lecture style.” These findings aligned with the study by Sercu (2005) as teachers indicated that they were working to make the adjustments required by the new program of studies, yet were not eliminating, necessarily, their former teaching practices. This was seen as a positive indication that curriculum change could be successful for teachers would be able to adjust some pre-existing teaching practices to fit with new curricular outcomes.

The second interview question asked teachers if they could maintain their teaching practices. Keys (2005) presented the impact of teachers on the implementation of new curriculum. Awareness of the interaction of a teacher’s beliefs and teacher practices meant that for change to continue, teachers must be convinced such required changes could be implemented and controlled by the teachers. Support for this concept was provided by *“I have been fairly willing to do this. The new curriculum tends to put more emphasis on student-directed learning,” “I threw out the acetates”* and, *“I have gone out of ‘comfort zone’ habitually, and have turned myself into a beginning teacher again.”* While teachers appeared to be receptive of the shift towards active learning, such a shift in teaching practices still presented significant challenges as teachers became less the director and more an informed facilitator of learning within the classroom as seen in *“I think that often the role of the teacher is a strong guide, rather than a dictator.”*

The factors of classroom environment such as resources, class size, and teacher timetable were addressed in the teacher responses. Waugh and Godfrey (1993) addressed the role of differing school policies and procedures under which the teachers were expected to work while implementing the reforms. There were concerns voiced about the additional subjects taught by these teachers and about the time required for the preparation of new unit and lesson plans, as well as for assessment tools. This was seen in comments such as

“teaching other subjects – Social Studies is only part of my assignment” and “delayed resources, lack of funding or an unwillingness on the part of schools + boards to support teacher-driven P.D.[Professional Development].”

Stodoksky and Grossman (2000) also had discussed the factors that affected teachers’ potential to adapt classroom practices for curricular change. Teacher responses supported the premise that curricular change was influenced by teachers’ selections of support materials and assessment tools. Teachers clearly indicated their willingness to work towards the goals of the new curriculum even while struggling to find the time required. The written responses indicated that *“The largest challenge has been test creation,” “specifically time to create new assessment pieces needed to implement new curriculum,”* and *“continually striving to tie the concepts into current events and the world in general. Students have appreciated the emphasis on relevance.”* There were unspoken implications inferred such as teachers’ use of time outside of the school day to prepare for the next set of lessons or that the Grade 12 Social Studies was not the only Social Studies class taught by teachers. The teachers indicated the need for the support of collegial networks and opportunities to share lessons and assessment exemplars as seen in *“Collaboration with colleagues is the most helpful”* and *“Access to PD and collaboration with other SH [Senior High] Social teachers both to share resources and ideas with respect to implementation.”*

Broadhead’s (2001) study of classroom environment stated that implementing curricular change required an integral role of teachers as part of the learning process, working to promote active student learning. One issue addressed was whether teachers would move away from a dependence on textbooks as the curricular reformers had hoped. In these initial stages of implementation, teachers’ comments as related to the textbooks were mixed. Based

on responses provided it appeared that teachers hope to reduce their reliance on the textbook, working instead to encourage student directed learning and more web-based materials such as current events, which would not stay as relevant if placed within the textbook parameters. This was evident in *“The text book is poor,”* *“Textbooks are disorganized and incoherent,”* and finally, *“New text is so web based when tech is off it is a hassle to rearrange lessons.”* Teachers reported using their lunch hour to set up for an afternoon of web-based activities and others expressed concern over the availability of computer lab time and space for students.

Not forgotten was the role of students in the implementation process, for without their commitment the transition from teacher-centred to student-centred activities was a more difficult process. Teachers reported mixed student reactions with some expressing difficulty with the new vocabulary and an unwillingness of students to take ownership of their learning, to other students who embraced the changes and felt engaged by the relevancy of the new course approaches and the reliance on technology.

The use of technology presented two issues – on the positive side it was seen as an important tool used to ensure relevancy and currency of course content. The negative side seen was the reliability of the technical tools, the availability of computer labs, and the familiarity with such resources, such as the effective use of Smart Boards in preparing and presenting course content. The teachers reported challenges and barriers to their implementation of the new curriculum such as the provision of in-service opportunities and support for technology. This was seen in *“The new technology has been very challenging even overwhelming and I am not alone thinking that more help would be appreciated.”*

The qualitative studies indicated that the experience factor influenced confidence levels while working with new curriculum outcome goals. While quantitatively, there were no significant differences seen for this factor, qualitatively, newer teachers were more willing to change their teaching practices than the more experienced teachers. These results aligned with the findings of Nicholson and Tracy (1982) and Kirkgöz (2007) who found the newer teachers to be more accepting of change. These responses by teachers also supported Akkus, Gunel, and Hand (2007) who indicated the less experienced teachers were more adaptable to changed expectations than the more experienced teachers. This was explained in part by the pedagogical training that recent graduates had been receiving in adapting the new approaches to their classroom repertoire. These reported findings did not align as well with Ha, Wong, Sum, and Chan (2008) who indicated that teaching experience affected teacher practices with experienced teachers more accepting of change than those with less experience. However, in this Northwest Alberta study, the reverse was seen with newer teachers being more enthusiastic about changing teaching practices to incorporate the new curriculum as evidenced by the comment *“I find it a great opportunity to try new methods.”* This was supported by teacher comments that the new program of studies aligned well with their teacher training. This is seen in *“my teaching practices have always been very influenced by the new curriculum and my ...course in Soc. Studies Curriculum and Instruction.”*

Human resources were addressed in the area of departmental collegiality, the networking of teachers, and the support provided by administration and school boards in providing on-going support through professional development activities such as workshops relevant to the teaching personnel. Teacher comments supported Keys' (2007) reported need to incorporate professional learning communities to encourage the practices specified in a

new curriculum linked to a teacher's current knowledge and to the proposed changes. Similar to the findings of Keys (2007), teachers embraced, opposed, or altered proposed reforms dependent on their personal perceptions of how their practices align with the proposals. Teachers reflected on how their teaching practices were related to the new program of studies as seen in *"Very willing – out of necessity, to meet the outcomes change needed to happen, and in the end not only the learning is occurring, the process has been engaging as well"* and *"The new curriculum ties in better to my teaching practices than the old curriculum did,"* and finally *"Yes in many ways, but I find that the conversation is very different (thematic and skill based rather than fact driven.)."*

Waugh and Godfrey (1993) referred to the challenges of finding resources and equipment to facilitate active investigations by students, coordinating planning with department members, and coaching students engaged in the active learning process. Each was addressed by the teachers in their written responses. This was seen in *"Departmental collaboration to help develop activities that will engage students"* and in *"creating a positive environment where students feel that they can share ideas with other."* However, the challenges were clear in *"Students prefer to be passive and are reluctant to take active participation in their own learning"* and *"The 'circular' layout of the text content is frustrating and annoying to many students."*

Another key aspect considered was an awareness of why some teachers would fail to alter their teaching practices. One aspect covered in this study was the value of departmental support – not always available in smaller school settings. Social Studies Departments allowed for collegial interaction and brainstorming of alternative approaches. Teachers working in more isolated conditions experienced increased difficulties in implementing

required changes mandated by the new curriculum. Although the quantitative analyses did not find significant differences between department size based on the survey responses, teachers indicated clearly the value of collegial networks, blogs, wikis, and Share Point links on the web. The qualitative responses provided support for this as shown in “*collaboration with other teachers through our division and other divisions*” and “*Our PLC [Professional Learning Community], the NRLC sessions and Wikki, there’s also a French SS30 group that shares the load.*”

The teachers’ reflective responses supported the ideas proposed by Brown (2002), Dicker (2001), Keemis and McTaggart (1990), and Hubball and Burt (2004). Teachers considered lesson development from the planning stage to actual implementation and subsequent revision as needed. This was supported with “*The resources I have developed around the curriculum; thus, affirming that what I am teaching meets the curriculum outcomes.*” Higher levels of teaching experience and exposure to critical thinking workshops could ease the transition of teachers from current teaching practices to those required to align with the new program of studies. More active learning (hands on) activities were seen as potentially positive in providing teachers opportunities to expand their teaching practices.

In the quantitative section of the study, only Question 12 concerning attendance at workshops showed significant differences. The teachers clearly indicated their satisfaction with the workshops presented by NRLC and their desire to access future in-service opportunities aligned with the new curriculum. Looking at the number of workshops attended by teachers (range 1 to 35), it would appear that teachers felt it worthwhile to attend workshops to better prepare them to make the transition to the new curriculum. Comments such as “*The workshops are excellent,*” and “*NRLC in-service when I was able to attend as*

well as a very collaborative relationship with a fellow teacher” confirmed the quantitative findings.

Qualitative Conclusions

The findings of this study were in alignment with the majority of the qualitative findings presented in the literature review. The results of this study suggested that teachers were very willing to change their teaching practices to meet the requirements of the new curriculum. Teachers clearly indicated their appreciation of opportunities presented to them for in-service workshops. Furthermore, the teachers clearly expressed their appreciation for collegial support networks, whether face-to-face within departments or at a distance through cohorts, blogs and wikis, unrestricted by departmental or school district boundaries. There were concerns expressed over the availability of technology and the ongoing need for training related to such technology. To address such concerns, they supported technology that allowed for diverse approaches to be shared by teachers, regardless of their location within the province of Alberta. However, it was made evident that there needed to be an adequate support for the provision of technology, the availability of professional development opportunities, and the time to incorporate new unit and lesson plans and assessment pieces. It was here that teachers saw the value of workshops and in-service opportunities to expand their repertoire of applicable skills to provide further enhancement of the dimensions of thinking in the Social Studies classroom setting.

The only variance from the literature findings was in the factor of teacher experience. In this Northwest Alberta study, newer teachers had no pre-conceptions about the curriculum, unlike the most experienced teachers. Therefore, they were willing to make the changes required to implement the new program of studies. This agreed with the findings of

Nicholson and Tracy (1982) and Kirkgöz (2007), and Akkus, Gunel, and Hand (2007) who indicated the less experienced teachers were more adaptable to changes required by new curriculum. These findings disagreed with those of Ha, Wong, Sum, and Chan (2008) who found the experienced teachers more accepting of change than those newer to the profession. This indicated the value of the teacher training programs designed to complement subject curriculum, not just in Canada but in other nations as well.

The potential challenges faced by teachers in relation to working environment and student receptivity to the program agreed with those factors identified in the literature. Teachers expressed concerns related to classroom environment such as the availability of resources and the use of technology. The roles of teachers and of students were explored as part of the implementation process with attention played to the importance of being engaged in the process of active learning. Also addressed were the issues of student receptivity with concerns expressed over attendance, vocabulary, and interest levels. The issue of the lack of time was identified as teachers worked to implement the curriculum and develop new lesson plans and assessment pieces that aligned with the curricular outcomes.

The reported teachers' experiences indicated that professional development opportunities did exist to assist their teaching of critical thinking skills. Although significant differences were seen when the number of workshops were compared to the attendance at NRLC sessions, these findings could not be generalized to the general Alberta teacher population due to the small sample size, and as it was unknown if other regions within Alberta had access to similar workshops as those provided in Northwest Alberta. Clearly recognized and referenced by teachers however, was the value of the NRLC and of the Learn

Alberta website to provide a foundational support framework for teachers of all levels of experience in implementing the new curriculum.

Recommendations

As a result of this research study, several recommendations are suggested. It is clear that further research is needed on teacher perceptions of the impact of curriculum on teaching practices. This study was conducted in the initial stages of new curriculum implementation. The teacher perceptions identified should lead to increased awareness of the role played by teachers in the on-going implementation process of new curricula. As the impact of the new curriculum on teaching practices moves beyond the initialization stages, teachers and students will become more familiar with the curriculum and with delivery modes of instruction aligned with the curriculum outcomes. In future, there will be a need to assess the effectiveness of that implementation process.

In this research study, the quantitative results identified the significance of workshops, while the qualitative responses indicated teachers' willingness to make the necessary changes to implement the new curriculum. Also provided were the teachers' perceptions of the support and challenges that teachers experienced during the initial implementation process. Evaluation of these research approaches should assist in the design of potentially more comprehensive studies. The existing survey design included instruments which could result in disadvantages such as potential bias in teacher responses, the return rate of surveys, and the coding of themes from the written responses. Future research designs should be carefully designed to address such possible limitations. As it must be recognized that this study employed a very small sample set, use of a similar research design in future would require that the study be expanded to include a larger sample of teachers. This would

ensure that the results could be extrapolated to the general population of Social Studies teachers in Alberta. This research study could become the basis of a larger, longitudinal study designed to assess the effectiveness of the implementation of this curriculum and of support resources such as textbooks.

One of the issues expressed was that of classroom environment and the availability of technology for students. If the program is to be student centered, an on-going commitment will be required for funding of computer networks with adequate workstations available for student use. Continuing efforts to expand accessibility to, and familiarity with, technology in today's global society is essential and will be required. Teachers and students continually are updating computer skills to maintain the relevancy and currency of support materials for inclusion in student centered learning. In order to ensure that students are provided maximum opportunities to develop the skills as expected by the new curriculum, professional development activities should be created with a focus on technology designed to allow for the sharing of such expertise and techniques between students and teachers.

Technological support has been traditionally provided by Alberta Education through the Learn Alberta website. However, it is suggested that a government supported, but teacher directed, web-site specific to Social Studies curriculum be created to allow Alberta teachers to upload resource materials being developed across the province. Currently, teachers are relying on dispersed collegial networks and cohorts to obtain additional resources but most cohorts are not open to non-members. This could be an effective way of providing for a wider resource base aligned with the curricular outcomes than is possible within individualized school district settings.

One recommendation is related to the issue of time. Feedback received during this study indicated that teachers were spending significant professional and private time working to develop the support materials required for the new curriculum. Increased levels of stress appear to be the result. These could be reduced by timetabling common preparation blocks to allow for collaboration or adjusting teaching loads during implementation to reflect the initially increased workload.

More research should be focused to provide effective professional development to support teachers, both new and experienced, within teacher training programs and within school board districts. This would be advantageous in providing on-going professional development designed to facilitate the transition and integration of new curriculum into teacher practices.

One role of school board administration is to support professional development opportunities such as provided through the funding of topical workshops. Teachers appreciate the opportunities provided to interact with other teachers undergoing the same process. Having the opportunity to create supportive networks while simultaneously practicing the skills required in developing student centred classrooms would be advantageous. One way to show such support would be to ensure that at least one staff member from each school is provided the funding necessary to attend relevant in-service workshops delivered within the region. This could then be used as an in-school professional development session for other staff members.

Hopefully, all stakeholders involved would be willing to undertake the necessary steps to ensure that the impact of the new curriculum on teaching practices will provide further opportunities for teachers to engage in meaningful and practical research studies as

part of their ongoing professional development. This study was focused on a small sample of teachers currently involved in the implementation process in Northwest Alberta. However, the findings and recommendations determined have potentially broad applications as this Social Studies program of studies continues to be implemented in the secondary schools of Alberta.

References

- Agnello, M.F. (2007, September/October). Public understanding to political voice: Action research and generative curricular practices in issues and reform. *The Social Studies*, 217-222. Retrieved March 29, 2009, from Professional Development Collection database.
- Alberta Education. (2007). Social studies kindergarten to grade 12. Retrieved March 16, 2009 from http://www.education.gov.ab.ca/k_12/curriculum/bySubject/social/soc30.pdfReferences. Alberta Education, Alberta, Canada.
- Alberta Education (2008). Critical Thinking: The Online Guide to Implementation. Retrieved June 5, 2009 from <http://www.onlineguide.learnalberta.ca/>
- Alberta Education (2009). 2009-2010 Diploma Examinations Program. Retrieved March 16, 2009 from http://education.saberta.ca/media/1137559/22%20ss30-2_subjectbulletin_2009_book.pdf. Alberta Education, Alberta, Canada.
- Akkus, R., Gunel, M., & Hand, B. (2007). Comparing an inquiry-based approach known as the Science writing heuristic to traditional Science teaching practices: Are there differences?. *International Journal of Science Education*, 29(14), 1745-1765. Retrieved February 28, 2010, from doi:10.1080/09500690601075629.
- Armstrong, D., & Shutes, R. (1981, December). Quality in curriculum documents: Some basic criteria. *Educational Leadership*, 39(3), 200-202. Retrieved March 29, 2009, from Professional Development Collection database.
- Broadhead, P. (2001). Curriculum change in Norway: thematic approaches, active learning and pupil cooperation - from curriculum design to classroom implementation. *Scandinavian Journal of Educational Research*, 45(1), 19-36. Retrieved June 16, 2009, from doi:DOI:10.1080/00313830020023375.
- Brown, B.L. (2002). Improving teaching practices through action research. Doctoral Dissertation, Virginia Polytechnic Institute and State University (2002). Retrieved 30 March 2008 from <http://scholar.lib.vt.edu/theses/available/etd-04152002-182022/unrestricted/BethBrownDissertation.pdf>
- Carson, T., (2009). Re-thinking curriculum change from the place of the teacher. In T. Autio & E. Ropo (Eds.), *International Conversations on Curriculum Studies: Subject, Society and Curriculum* (pp.212-224). Rotterdam: Sense Publishers.
- Case, R., & Wright, I. (1997, Fall) Taking seriously the teaching of critical thinking. *Canadian Social Studies*, 32 (1), 12-19. Retrieved December 11, 2007 from <http://tc2.ca/about/about-critical-thinking/>

- Dicker, M. (2001). Using action research to navigate an unfamiliar teaching assignment. *Theory into Practice*, 29(3), 203-208. Retrieved March 25, 2008.
- Ha, A., Wong, A., Sum, R., & Chan, D. (2008, February). Understanding teachers' will and capacity to accomplish physical education curriculum reform: the implications for teacher development. *Sport, Education & Society*, 13(1), 77-95. Retrieved March 16, 2009, doi:10.1080/13573320701780746
- Hubball, H., & Burt, H. (2004, May). An integrated approach to developing and implementing learning-centred curricula. *International Journal for Academic Development*, 9(1), 51-65. Retrieved March 29, 2009, doi:10.1080/1360144042000296053
- Kallen, D. (1996, March). Curriculum reform in secondary education: Planning, development and implementation. *European Journal of Education*, 31(1), 43-55. Retrieved December 16, 2007, from Professional Development Collection database.
- Keemis, S. & McTaggart, R. (1990). The action research planner. Victoria, Australia: Deakin University Press.
- Keys, P.M. (2005, October). Are teachers walking the walk or just talking the talk in science education? *Teachers & Teaching*, 11 (5), 499-516. Retrieved March 16, 2009, doi: 10.1080/13540600500238527
- Keys, P. (2007, March). A knowledge filter model for observing and facilitating change in teachers' beliefs. *Journal of Educational Change*, 8(1), 41-60. Retrieved March 16, 2009, doi:10.1007/s10833-006-9007-5
- Kirkgoz, Y. (2008). Curriculum innovation in Turkish primary education. *Asia-Pacific Journal of Teacher Education*, 36(4), 309-322. Retrieved February 28, 2010 from doi:10.1080/13598660802376204.
- Lee, J. (2000). Teacher receptivity to curriculum change in the implementation stage: the case of environmental education in Hong Kong. *Journal of Curriculum Studies*, 32(1), 95. Retrieved February 14, 2010, from Professional Development Collection database.
- Nicholson, E., & Tracy, S. (1982). Principal's influence on teacher's attitude and implementation of curricular change. *Education*, 103(1), 68. Retrieved February 27, 2010, from Professional Development Collection database.
- Patrick, J. (1984). *Critical thinking in the social studies*. Eric Clearinghouse for Social Studies/Social Science Education. Bloomington. Retrieved December 11, 2007 from ERIC Document Reproduction Service No.ED272432).

Saskatchewan Education.(2007) Chapter IV: Critical and Creative Thinking,1-9. Retrieved May 1, 2009 from <http://www.sasked.gov.sk.ca/docs/policy/cels/e14.html>

Sercu, L. (2005). Foreign language teachers and the implementation of intercultural education: a comparative investigation of the professional self-concepts and teaching practices of Belgian teachers of English, French and German. *European Journal of Teacher Education*, 28(1), 87-105. Retrieved March 05, 2010, from doi:10.1080/02619760500040389.

Stodolsky, S., & Grossman, P. (2000, February). Changing Students, Changing Teaching. *Teachers College Record*, 102(1), 125-172. Retrieved March 16, 2009, from Education Research Complete database.

Suàrez-Orozco, M. & Sattin, C., (2007, April). Wanted: Global citizens. *Educational Leadership*. 58-62. Retrieved March 29, 2009, from Professional Development Collection database.

Waugh, R., & Godfrey, J. (1993, October). Teacher receptivity to system-wide change in the implementation change. *British Educational Research Journal*, 19(5), 565-578. Retrieved March 16, 2009, from Education Research Complete database.

Wright, I., (Fall, 2003). The centrality of critical thinking in citizenship education. *Canadian Social Studies*. 38 (1), 1-10. Retrieved December 16, 2007 from http://www.quasar.ualberta.ca/css/Css_38_1/Arcentrality_critical_thi...

Yilmaz, A. (2009). Self-efficacy perceptions of prospective Social Studies teachers in relation to history teaching. *Education*, 129(3), 506-520. Retrieved January 12, 2010, from Professional Development Collection database.

Zevin, J., & Corbin, S. (1998, January). Measuring secondary social studies students' perceptions of nations. *Social Studies*, 89 (1), 35.1-6. Retrieved December 10, 2007, from Professional Development Collection database.

Appendix 1

Cover Letter and Consent Form Sent to Superintendents

2009-07-15

Superintendent

Dear _____:

I am presently completing a Master of Education degree through the University of Northern British Columbia. For my thesis, I plan to conduct a research study on the initial impact created by the implementation of the new Social Studies 12 Curriculum on Grade 12 Social teachers working within Northwest Alberta. The issue that I hope to address through my research study is: **Are there measureable changes in teacher perception of the impact of the new curriculum on their teaching practices?** The particular focus in this research study will be the use of critical thinking in teaching practices.

It is expected that this research study will allow professional development opportunities for teachers, providing them with an awareness of their current teaching practices as related to critical thinking skills.. Due to the anonymity of this study, there will be no risks incurred by teachers.

I am requesting your permission to contact Social Studies teachers within the school district. Will the secondary school principals need to be contacted before I approach these teachers?

All Social Studies 12 teachers will be asked to participate in this research by completing two surveys. The initial survey (September, 2009), will ask them to review their teaching practices used for teaching the old Social Studies 30 and 33 curricula. A second survey (December, 2009) will ask them to review the questions when considering the Social Studies 30-1 and 30-2 curricula implemented in September, 2009. Teachers' participation is voluntary and they may withdraw at any time. Copies of the surveys have been attached for your review.

This research study is subject to approval by the UNBC Research Ethics Board before any actual research will be conducted.

If you have questions and/or comments about my research project, please email me at susan.mills@gppsd.ab.ca or call me at 780-532-7721 ext.1158. You may also contact my co-supervisors, Dr. Bruce Galenza (email at bgalenza@gprc.ab.ca 780-539-2994) or Dr. Peter Macmillan (peterm@unbc.ca or phone at 250-960-5828).

If you do not have any questions and/or comments, would you please sign the attached consent form and return it to me at the Grande Prairie Composite High School. Thank you for your assistance with this research study.

Sincerely

Sue Mills

cc: Grande Prairie Public School District #2357, 10213-99 Street, Grande Prairie, Alberta T8V 2H3
Fort Vermillion School District #52, P.O. Bag #1, Fort Vermillion, AB T0H 1N0
Grande Prairie & District Catholic Schools, 9902-101 St. Grande Prairie, AB T8V 2P4
High Prairie School Division #48, Box 870, High Prairie, AB, T0G 1E0
Northland School Division #61, P.O. Bag 1400, 9807-77 Avenue, Peace River, AB T8S 1V2
Peace River School Division, 10018-101 St. Peace River, AB T8S 2A5
Peace Wapiti School Division #76, 8611A -108 St. Grande Prairie, AB T8V 4C5
Holy Family Catholic Regional School Division #37, 10307-99 St. Peace River, AB T8S 1R5
Northwest Francophone Education Region No.1, P.O. Box 1200, St. Isidore, AB T0H 3B0

Appendix 3

Survey #1 September 2008-2009 School Year

Please complete this survey based on your teaching practices while teaching **Social Studies 30 and Social Studies 33**.

Survey #1**Assessing Impact of Curriculum on Teacher Practices for the 2008-2009 School Year**

ID # _____ Year Born _____ Male _____ Female _____					
Total years teaching experience _____ Total years Social Studies teaching experience _____					
Number of teachers in your Social Studies Department _____ Piloted Social Studies 30-1 or 30-2 curriculum _____					
Number of critical thinking workshop/program sessions attended _____					
Please circle the number that best represents your response to each question.					
Example Question: How often do you use computer based technology when presenting lessons?					
0 Never 1 Rarely 2 Sometimes 3 Usually 4 Always					
<i>Thank you for your participation in this survey. Your time and assistance is greatly appreciated.</i>					
1. How often do you, yourself, use the vocabulary of critical thinking? Example: Analyze , Compare, Evaluate	0	1	2	3	4
2. How often do you allow students to demonstrate learning gained outside the classroom? Example: Town hall meeting, Community project, Fundraising	0	1	2	3	4
3. How often do you organize discussions/debates on an issue? Example: Round table talks , Formal debates, Mock trials	0	1	2	3	4
4. How often do you encourage students to analyze sources for bias? Example: Political Cartoons, News articles, Video footage	0	1	2	3	4
5. How often do you supplement textbook coverage with materials to present alternative perspectives? Example: Video clips, Primary documents, Audio clips	0	1	2	3	4
6. How often do you engage students in investigating current issues that have multiple possible solutions? Example: Panel discussion , Political forum, Action plan	0	1	2	3	4
7. How often do you require students to support their statements with well qualified reasons? Example: Oral presentation, Written analysis, Position paper	0	1	2	3	4
8. How often do you encourage students to analyze news sources for accuracy of material presented? Example: Multiple perspectives presented, Compare different accounts of an event, Predict outcome of event based on coverage	0	1	2	3	4
9. How often do you encourage students to consider multiple perspectives on an issue? Example: Aboriginal ,Francophone, Labour	0	1	2	3	4
10. How often do you use assessment activities to demonstrate critical thinking in a differentiated form? Example: Journal writing, Photo essay, Video footage	0	1	2	3	4
11. How often do you go to the Alberta Education/Learn Alberta website?	0	1	2	3	4
12. How often do you attend Social Studies workshops presented by the Northwest Regional Learning Consortium (NRLC)?	0	1	2	3	4

Appendix 4

Survey #2 December 2009 for 2009-2010 School Year

Please complete this survey based on your teaching practices while teaching **Social 30-1 and 30-2**.

Survey #2
Assessing Impact of Curriculum on Teacher Practices for the School Year 2009-2010
while teaching Social 30-1/or Social 30-2.

ID # _____ Year Born _____ Male _____ Female _____					
Total years teaching experience _____ Total years Social Studies teaching experience _____					
Number of teachers in your Social Studies Department _____ Piloted Social Studies 30-1 or 30-2 curriculum _____					
Number of critical thinking workshop/program sessions attended _____					
Please circle the number that best represents your response to each question.					
Example Question: How often do you use computer based technology when presenting lessons?					
0 Never 1 Rarely 2 Sometimes 3 Usually 4 Always					
<i>Thank you for your participation in this survey. Your time and assistance is greatly appreciated.</i>					
1. How often do you, yourself, use the vocabulary of critical thinking? Example: Analyze , Compare, Evaluate	0	1	2	3	4
2. How often do you allow students to demonstrate learning gained outside the classroom? Example: Town hall meeting, Community project, Fundraising	0	1	2	3	4
3. How often do you organize discussions/debates on an issue? Example: Round table talks , Formal debates, Mock trials	0	1	2	3	4
4. How often do you encourage students to analyze sources for bias? Example: Political Cartoons, News articles, Video footage	0	1	2	3	4
5. How often do you supplement textbook coverage with materials to present alternative perspectives? Example: Video clips, Primary documents, Audio clips	0	1	2	3	4
6. How often do you engage students in investigating current issues that have multiple possible solutions? Example: Panel discussion , Political forum, Action plan	0	1	2	3	4
7. How often do you require students to support their statements with well qualified reasons? Example: Oral presentation, Written analysis, Position paper	0	1	2	3	4
8. How often do you encourage students to analyze news sources for accuracy of material presented? Example: Multiple perspectives presented, Compare different accounts of an event, Predict outcome of event based on coverage	0	1	2	3	4
9. How often do you encourage students to consider multiple perspectives on an issue? Example: Aboriginal ,Francophone, Labour	0	1	2	3	4
10. How often do you use assessment activities to demonstrate critical thinking in a differentiated form? Example: Journal writing, Photo essay, Video footage	0	1	2	3	4
11. How often do you go to the Alberta Education/Learn Alberta website?	0	1	2	3	4
12. How often do you attend Social Studies workshops presented by the Northwest Regional Learning Consortium (NRLC)?	0	1	2	3	4

Survey 2: Part B Assessing the Impact of Curriculum Change on Teacher Practices

ID #_____ Your time and cooperation in this research study is greatly appreciated.

Interview Questions: Please complete the following questions as part of this study. Please use the back of this paper or more paper if necessary.

1. How would you describe your willingness to change your teaching practices to align with the new curriculum?

2. Does the new curriculum allow you to maintain your personal teaching style? Explain.

3. What elements and conditions support your efforts to implement the new curriculum?

4. What challenges and barriers inhibit your efforts to implement the new curriculum?

Appendix 5

Summary Tables of ANOVA and t-tests for Clustered Questions

Table 2

ANOVA and t-test Results for Critical Thinking Question Cluster and Multiple Approaches Question Cluster

Critical Thinking (questions 1, 3, 4, 5)	<i>F</i> value	<i>p</i>
Pre-Post Surveys	.31	.58
Independent Variable: Sex	.27	.61
Pre-Post Surveys x Sex	.31	.58
Pre-Post Surveys	.82	.37
Independent Variable: Total Years Experience	.33	.57
Pre-Post Surveys x Total Years Experience	.82	.37
Pre-Post Surveys	.92	.35
Independent Variable: Experience social studies	.09	.77
Pre-Post Surveys x Experience social studies	.03	.87
Pre-Post Surveys	.90	.35
Independent Variable: Department size	.15	.74
Pre-Post Surveys x Department size	.01	.92
Pre-Post Surveys	1.09	.29
Independent Variable: Workshops	.01	.92
Pre-Post Surveys x Workshops	.80	.38
Multiple Approaches (questions 6, 7, 8, 9, 10)	<i>F</i> value	<i>p</i>
Pre-Post Surveys	3.54	.07
Independent Variable: Sex	.00	.96
Pre-Post Surveys x Sex	1.49	.23
Pre-Post Surveys	2.35	.14
Independent Variable: Total Years Experience	.30	.59
Pre-Post Surveys x Total Years Experience	1.14	.30
Pre-Post Surveys	2.15	.16
Independent Variable: Experience social studies	.09	.77
Pre-Post Surveys x Experience social studies	1.39	.25
Pre-Post Surveys	2.03	.17
Independent Variable: Department size	.01	.94
Pre-Post Surveys x Department size	.00	.99
Pre-Post Surveys	1.71	.20
Independent Variable: Workshops	.47	.50
Pre-Post Surveys x Workshops	.81	.38
t-tests	t statistic	<i>p</i>
Critical Thinking	.98	.34
Multiple Approaches	1.46	.16

Table 3

Paired Samples t-test Results for Pre and Post Survey Responses Collapsed Across Means

Survey1:Survey2 Qs	Mean Differences	Std Deviation	t	df	p
Pair 1 Q1-Q13	3.08	0.72	-.34	27	.74
Pair 2 Q2-Q14	1.83	1.02	-.58	27	.57
Pair 3 Q3-Q15	2.21	0.86	-.29	27	.77
Pair 4 Q4-Q16	3.25	0.67	-1.15	27	.26
Pair 5 Q5-Q17	3.24	0.65	.42	27	.81
Pair 6 Q6-Q18	2.71	0.95	-.25	27	.54
Pair 7 Q7-Q19	3.46	0.69	-1.55	27	.13
Pair 8 Q8-Q20	2.84	0.78	0.00	27	1.00
Pair 9 Q9-Q21	3.36	0.77	-.93	27	.36
Pair 10 Q10-Q22	2.42	0.98	-.92	27	.36
Pair 11 Q11-Q23	2.37	1.01	.07	27	.94
Pair 12 Q12-Q24	2.72	0.99	1.10	27	.03

Table 4

Independent Variable of Sex for Survey 1 and Survey 2

Survey1	Means	Means			
Question #	male	female	df	t statistic	p
1	2.86	3.05	12.87	-0.59	0.56
2	1.43	1.86	15.31	-1.10	0.29
3	2.14	2.10	8.94	0.11	0.92
4	3.43	3.29	8.84	0.43	0.67
5	3	3.43	8.26	-1.28	0.24
6	2.71	2.62	12.02	0.22	0.83
7	3.43	3.4	12.10	0	1
8	2.71	2.71	12.23	0	1
9	3.43	3.33	11.88	0.27	0.80
10	1.86	2.43	12.79	-1.36	0.20
11	2.57	2.33	9.76	0.57	0.58
12	3.57	2.67	19.31	3.10	0.01
Survey 2	Means	Means			
Question #	male	female	df	t statistic	p
1	3.00	3.14	12.94	-0.53	0.61
2	1.43	2.10	20.85	-2.19	0.04
3	2.43	2.33	11.15	0.27	0.79
4	3.14	3.38	10.10	-0.78	0.5
5	3.14	3.29	9.74	-0.48	0.64
6	3.14	2.86	9.87	0.74	0.48
7	3.43	3.43	15.92	0	1
8	3.14	2.91	10.46	0.79	0.45
9	3.43	3.43	12.10	0	1
10	2.57	2.48	10.37	0.22	0.83
11	2.14	2.48	10.79	-0.71	0.45
12	3	2.38	15.09	1.19	0.25

Table 5

Independent Variable of Years of Total Teaching Experience

Survey1 Question #	Means Fewer than 12	Means More than 12	df	t statistic	<i>p</i>
1	3	3	25.67	0	1
2	2	1.53	25.29	1.15	0.26
3	2.39	1.87	25.76	1.53	0.14
4	3.46	3.2	25.6	1.03	0.31
5	3.46	3.2	24.57	1.06	0.30
6	2.69	2.6	25.89	0.23	0.82
7	3.46	3.4	25.08	0.25	0.80
8	2.92	2.53	25.16	1.21	0.24
9	3.54	3.2	24.27	1.10	0.30
10	2.31	2.27	25.72	0.10	0.92
11	2.31	2.47	26	-0.46	0.65
12	2.85	2.93	23.40	-0.23	0.82

Survey2 Question #	Means Fewer than 12	Means More than 12	df	t statistic	<i>p</i>
1	3.23	3	25.82	0.90	0.38
2	2.31	1.6	25.10	2.04	0.05
3	2.54	2.2	25.01	1.11	0.28
4	3.39	3.27	25.92	0.43	0.67
5	3.46	3.07	25.41	1.70	0.10
6	2.92	2.93	25.60	-0.03	0.98
7	3.31	3.53	25.58	-0.81	0.42
8	3	2.93	25.26	0.26	0.80
9	3.39	3.47	24.74	-0.35	0.73
10	2.54	2.47	24.85	0.20	0.84
11	2.46	2.33	22.44	0.30	0.77
12	2.62	2.47	22.37	0.37	0.72

Table 6

Independent Variable of Years of Social Studies Teaching Experience

Survey 1	Means	Means			
Question #	Fewer than 10.5	More than 10.5	df	t statistic	<i>p</i>
1	2.93	3.07	26	-0.46	0.65
2	1.86	1.64	25.46	0.52	0.61
3	2.21	2	24.06	0.61	0.55
4	3.29	3.36	25.53	-0.28	0.78
5	3.29	3.36	25.53	-0.28	0.78
6	2.71	2.57	25.42	0.35	0.73
7	3.43	3.43	26	0	1
8	2.71	2.71	23.80	0	1
9	3.43	3.29	24.26	0.43	0.67
10	2.29	2.29	23.65	0	1
11	2.21	2.57	24.66	-1.03	0.31
12	2.79	3	25.99	-0.59	0.56
Survey 2	Means	Means			
Question #	Fewer than 10.5	More than 10.5	df	t statistic	<i>p</i>
1	3.14	3.07	25.76	0.27	0.79
2	2.29	1.57	25.98	2.04	0.05
3	2.36	2.36	24.83	0	1
4	3.29	3.36	25.98	-0.26	0.80
5	3.29	3.21	24.77	0.29	0.78
6	2.71	3.14	25.95	-1.34	0.19
7	3.29	3.57	23.59	-1.02	0.32
8	2.93	3	24.61	-0.27	0.79
9	3.36	3.5	22.41	-0.59	0.56
10	2.43	2.57	22.38	-0.39	0.70
11	2.36	2.43	23.86	-0.17	0.87
12	2.5	2.57	25.87	-0.18	0.86

Table 7

Independent Variable of Size of Social Studies Department

Survey1	Means	Means			
Question #	Fewer than 4	More than 4	df	t statistic	p
1	2.92	3.07	21.83	-0.45	0.66
2	1.77	1.73	25.49	0.09	0.93
3	2.15	2.07	24.38	0.24	0.81
4	3.31	3.33	26.00	-0.10	0.92
5	3.31	3.33	26.00	-0.10	0.92
6	2.46	2.8	25.64	-0.84	0.44
7	3.31	3.53	25.54	-0.94	0.36
8	2.54	2.87	22.39	-0.99	0.33
9	3.62	3.13	25.98	1.52	0.14
10	2.38	2.2	25.84	0.45	0.66
11	2.23	2.53	23.34	-0.85	0.40
12	2.69	3.07	23.85	-1.02	0.32

Survey 2	Means	Means			
Question #	Fewer than 4	More than 4	df	t statistic	p
1	2.92	3.27	22.63	-1.32	0.20
2	2.08	1.8	25.84	0.75	0.46
3	2.31	2.4	25.18	-0.29	0.77
4	3.31	3.33	25.13	-0.09	0.93
5	3.46	3.07	24.43	1.65	0.11
6	2.92	2.93	20.66	-0.03	0.98
7	3.23	3.6	18.00	-1.28	0.22
8	2.85	3.07	25.59	-0.84	0.41
9	3.46	3.4	25.08	0.25	0.80
10	2.54	2.47	25.96	0.20	0.85
11	2.46	2.33	25.34	0.30	0.77
12	2.31	2.73	26	-1.10	0.28

Table 8

Independent Variable of Number of Critical Thinking Workshops Attended

Survey1	Means	Means			
Question #	Fewer than 5	More than 5	df	t statistic	p
1	3	3	25.70	0	1
2	1.69	1.83	21.52	-0.34	0.74
3	2.16	2.08	24.60	0.12	0.91
4	3.44	3.17	21.98	1.04	0.31
5	3.44	3.17	21.98	1.04	0.31
6	2.56	2.75	24.30	-0.46	0.65
7	3.5	3.33	23.46	0.68	0.50
8	2.56	2.92	22.44	-1.07	0.29
9	3.19	3.58	22.98	-1.32	0.20
10	2.31	2.25	23.11	0.15	0.88
11	2.4	2.42	19.56	-0.11	0.91
12	2.5	3.42	25.88	-2.97	0.01

Survey 2	Means	Means			
Question #	Fewer than 5	More than 5	df	t statistic	p
1	3	3.25	24.25	-1.03	0.31
2	2.19	1.58	17.66	1.57	0.13
3	2.25	2.5	25.99	-0.82	0.42
4	3.31	3.33	22.44	-0.07	0.94
5	3.19	3.33	18.69	-0.56	0.59
6	2.81	3.08	22.80	-0.81	0.42
7	3.5	3.33	25.86	0.60	0.55
8	3	2.92	20.57	0.30	0.77
9	3.31	3.58	25.99	-1.18	0.25
10	2.31	2.75	23.59	-1.20	0.24
11	2.63	2.08	15.09	1.20	0.25
12	2.13	3.08	25.95	-2.79	0.01

Appendix 6

Summary Table of ANOVA tests

Table 9

Results of 2x2 Repeated Measures ANOVA Tests

Survey Questions	Sex Treatment		Years of Experience Teaching Treatment		Years Experience in Social Studies Treatment		Department Size Treatment		Number of Workshops Attended Treatment	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Q1:Q13										
Within Subjects	.47	.50	.60	.45	.77	.39	1.03	.320	1.00	.33
Between Subjects	.01	.92	2.37	.14	1.5	.23	2.831	.11	1.00	.33
Interaction	.04	.85	.063	.80	.12	.73	.151	.70	.03	.88
Q2 :Q14										
Within Subjects	.02	.89	.12	.73	.18	.68	.13	.72	.01	.92
Between Subjects	.17	.68	.48	.5	2.48	.13	.28	.60	5.33	.03
Interaction	2.62	.12	2.26	.15	2.37	.14	.83	.37	.58	.45
Q3 :Q15										
Within Subjects	.98	.33	2.28	.14	2.29	.14	2.24	.15	1.95	.17
Between Subjects	.41	.53	.043	.84	.45	.49	.00	.99	.49	.49
Interaction	.50	.48	2.03	.17	.34	.57	.00	.97	.02	.88
Q4 :Q16										
Within Subjects	.33	.56	.10	.75	.12	.74	.075	.79	.25	.62
Between Subjects	.36	.93	.10	.75	.12	.74	1.05	.32	1.2	.28
Interaction	2.33	.14	.02	.88	.09	.77	.58	.45	.38	.55
Q5:Q17										
Within Subjects	.00	1.00	.67	.42	.54	.47	.62	.44	.28	.60
Between Subjects	.36	.56	1.2	.28	.54	.47	.62	.44	2.49	.13
Interaction	.49	.49	.17	.68	.17	.19	.85	.37	.01	.93
Q6:Q18										
Within Subjects	1.62	.22	1.73	.2	1.68	.21	1.5	.23	1.31	.26
Between Subjects	.13	.71	.53	.47	1.68	.21	.29	.59	.61	.44
Interaction	.78	.39	.43	.52	.00	1.00	.02	.89	1.	.33
Q7 :Q19										
Within Subjects	.16	.69	.010	.92	.00	1.00	.00	1.00	.00	1.00
Between Subjects	.63	.43	2.01	.17	2.00	.17	.00	1.00	.00	1.00
Interaction	.73	.40	.321	.58	.79	.38	1.38	.250	.11	.74
Q8:Q20										
Within Subjects	.31	.09	1.43	.24	1.29	.27	1.33	.26	.91	.35
Between Subjects	2.25	.15	.59	.45	.051	.82	.1	.76	2.25	.15
Interaction	.53	.47	1.19	.29	.019	.89	.81	.38	.06	.81
Q9:Q21										
Within Subjects	.83	.37	.44	.51	.28	.60	.27	.61	.15	.71
Between Subjects	.83	.37	2.82	.11	.12	.30	.00	.97	.98	.33
Interaction	.10	.76	.80	.38	.07	.79	1.4	.25	1.52	.29

Survey Questions	Sex Treatment		Years of Experience Teaching Treatment		Years Experience in Social Studies Treatment		Department Size Treatment		Number of Workshops Attended Treatment	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Q10:Q22										
Within Subjects	.90	.35	.68	.42	.74	.4	.77	.39	.82	.38
Between Subjects	.16	.69	.24	.63	.06	.82	.09	.77	.13	.72
Interaction	.14	.71	.00	.98	.18	.68	.68	.42	.12	.73
Q11:Q23										
Within Subjects	.02	.88	.01	.92	.01	.93	.041	.84	.07	.8
Between Subjects	.02	.88	.07	.79	.64	.43	2.46	.13	1.43	.24
Interaction	.12	.74	.01	.91	.23	.63	.04	.84	1.37	.25
Q12:Q24										
Within Subjects	5.85	.02	7.27	.01	6.95	.01	6.78	.02	6.73	.02
Between Subjects	.07	.79	.44	.52	.02	.88	.83	.37	.01	.93
Interaction	2.29	.14	.13	.72	.2	.66	.54	.47	4.84	.04