9TH floor West, Devonian Building
11160 Jasper Avenue
Edmonton, Alberta, T5K 0L2
Telephone : (780) 415-8524
Fax : (780) 422-9157
Email : AOC@gov.ab.ca
http://www.albertaonline.ab.ca

Acknowledgements

I am pleased to make this report available regarding K-12 online learning in Alberta. The Alberta Online Consortium (AOC) sponsored the research into emerging instructional practices associated with the term "online education". The research is a proactive examination of current practices within the Alberta online community with the goal of improving education for all children. The rapid growth of internet-based instructional environments, and the variety of instructional strategies currently employed by online educators, made the research initiative timely. AOC members, and the Board, believe that research into student performance is critical to the continuing improvement of online learning opportunities for students. The AOC Board is committed to the continuous improvement of online courses and programs, online curricular content, instructional practices, and the development of pedagogical theories and philosophies, while ensuring that student outcomes are improving each year.

Students and their parents choose online learning for many reasons. Some choose online learning because they are unable to enroll in particular courses due to geographic isolation, timetabling issues, illness, or a desire to study in a self-paced educational environment. Regardless of the diverse reasons for choosing an online environment, the need to examine educational practices is paramount. Successful online education requires new relationships between parents, students and teachers. The results of this study confirm that parents and teachers both regard the provision of online education as important to the success of their children/students. Students reported high levels of satisfaction with online education, as reflected by the study findings. Students and their parents indicated that participation in online education had enhanced the knowledge and skills necessary for lifelong learning. Further, students and parents reported that skill development in the use of technology for learning continued to improve over the duration of the students' online studies.

The AOC Board concurs with Mr. Bruce Schollie, the author of the report, that additional research into online learning is critical. It is important to note that all of the online programs in this study have been in operation less than five years. Therefore, the

findings presented in the report represent "a slice of time." Longitudinal studies are necessary to determine the long-term benefits of internet-based online learning, while elucidating the many challenges associated with teaching "at a distance." The Board looks forward to strengthening the AOC's research agenda, with the full support of members, and in partnership with Alberta Learning.

In closing, I would like to acknowledge the school districts whose financial contributions made this research study possible. They include:

Rocky View School Division #41 (Rockyview Virtual School)
East Central Alberta Catholic Separate Schools Regional Division #16 (School of Hope)
Edmonton Public School District #7 (LearnNet Online)
Pembina Hills Regional School District #7 (The Alberta Distance Learning Centre)
Greater St. Albert Catholic School District #29 (St. Gabriel Virtual School)
Red Deer Regional Catholic School District #34
Calgary Board of Education (Chinook College)

I would be remiss if I did not acknowledge the financial and project management support from the System Improvement and Reporting Division of Alberta Learning, particularly, the expertise of Ms. Frances Arnieri Ballas and Mr. Dennis Belyk as joint project managers, along with Dr. Bill Muirhead, AOC Executive Director. Finally, I would like to thank the members of the AOC Research Advisory Committee for their contribution, and assistance in establishing the direction of this research project. The AOC Research Advisory Committee members included: Mr. Gary Popowich, Dr. Peter Darby, Dr. Ron Cammaert, Mr. Ron Taylor, Mrs. Judy Spencer, Mr. John Darroch, Mr. Ralph Helder, Dr. Rosina Smith, Dr. Terry Anderson and Mr. Bruce Schollie.

I look forward to a continuing discussion regarding online learning in Alberta and hope that this report is the first of many research efforts aimed at improving online student outcomes in Alberta.

Sincerely,

Ms. Paulette Hanna
Chair
Alberta Online Consortium

Student Achievement and Performance Levels in Online Education Research Study

Final Report

Prepared By:

79 Dunning Close
Red Deer, AB T4R 2G8
Ph: (403) 346-9849
Fax: (403) 346-7263
www.schollie.com

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A. Executive Summary

With the rapid growth and evolution of online education, a need was recognized to understand the strengths and challenges inherent in this form of education. The Alberta Online Consortium (AOC) with support from Alberta Learning commissioned a research study to assess what online education programs in Alberta are doing well and where improvements can be made. Specifically, the research sought to quantify outcomes, issues, challenges, and opportunities surrounding virtual education.

To meet the objectives of this research, a separate survey was administered with students, parents, and teachers who are involved in online education in Alberta. The survey was conducted on the World Wide Web during the period between November 3rd and December 8th, 2000. Response to the survey was relatively strong with 908 students, 557 parents, and 177 teachers completing the survey.

A survey of 14 online education program administrators was also conducted. In addition to the surveys, data from Provincial Achievement Tests and Grade 12 Diploma Exams were examined for the 1998/1999 and 1999/2000 school years.

The research advisory committee of the Alberta Online Consortium (AOC) established a set of outcomes and indicators as reference points for measurement purposes. The framework draws on a number of outcomes and indicators to reflect the distinct elements of online education and its students.

Following on the framework for measuring the performance of online education, the following points highlight the key results of this study and provide an overall assessment of each of the five outcomes.

Outcome 1: Online Education students are academically skilled.

Overall Assessment: Some indicators suggest that this area needs improvement.

- Participation of virtual students in standardized achievement testing is lower than for non-virtual students. Participation rates for non-virtual students ranges between 90%-96% compared to 65% to 75% for virtual students.

- Compared to non-virtual students, standardized achievement test scores in Mathematics for virtual students is an issue in grades 3, 6, 9, and 12. However, the trend in virtual student standardized achievement test scores for Mathematics from 1998/99 to 1999/00 shows some improvement at the grades 3, 6, and 12 levels relative to non-virtual students.

Outcome 1: Online Education students are academically skilled.

Overall Assessment: Some indicators suggest that this area needs improvement.

- Relative to non-virtual students, virtual student standardized achievement scores in the sciences is an issue in grade 6. Relative to non-virtual students, scores are also weak in grade 9, and continue to be lower than non-virtual students in grade 12 Biology, Chemistry, and Physics. The trend over the two-year period is stable or improving in virtual school student achievement in Chemistry 30 and Physics 30, but declining relative to non-virtual students in Biology 30.
- Achievement in grades 3, 6, and 9 Language Arts, English 33, and Social Studies 33 is comparable between virtual and non-virtual students. However, in grade 9 Social Studies and Social Studies 30, virtual student achievement at both standards is lower by 5.4%-11.6% in 1999/00.
- Since being in online education, an academic performance increase is reported by 64% of students and 68% of parents whose children are in online education. However, evidence from the analysis of achievement test results based on the prior level of achievement at grades 6 and 9 shows lower than expected results in Mathematics.
- The majority of online education students, parents, and teachers indicate that student achievement of academic outcomes is strong, especially in the areas of critical thinking and the ability to solve problems, where 89% or more felt that the online school was helping students improve their skills. However, just 46% of students felt that the online school was helping them improve speaking and 57% felt their listening skills were improving 'some' or 'a lot'.
- 95% or more students, parents, and teachers are satisfied or very satisfied with the quality of education delivered in their online school and over 92% of students and parents are satisfied with the quality of teaching provided.

Outcome 2: Online Education students are proficient in technology.

Overall Assessment: All indicators suggest that this outcome is being achieved.

- Over 90% of online education students, parents, and teachers indicate that the online schools are helping students improve their skills at using technology to research an issue. Over 85% of students and over 90% of teachers and parents feel that students' skills are improving in general technology use, and in using technology to communicate and solve problems.
- In terms of current technology skills, 95% of students and 98% of parents feel that students have good computer skills.
- 86% of students and 90% of parents are satisfied with the software or hardware provided by the online school. Additionally, 90% of students and 92% of parents are satisfied with the technology help the school provides.

Outcome 3: Online Education students are life-long learners.

Overall Assessment: Most indicators suggest that this outcome is being achieved.

- 95% of students, 97% of parents, and 99% of teachers feel that students are improving in the ability to 'learn on his or her own.' Over 75% of students, and over 90% of parents and teachers feel that students' ability to manage time and their self-confidence is also improving.
- 89% of students, 90% of parents and 94% of teachers agree that the online school is teaching students the knowledge, skills, and attitudes to live in a changing society.
- Over 80% of students and parents, and over 85% of teachers agree that the online school is teaching students the rights and responsibilities of citizenship and the knowledge, skills, and attitudes required:
- for entry into post-secondary education and training.
- to enter the work place.
- Completion rates for online education courses are anecdotally reported at between 70% and 95%.

Outcome 4: Online Education students are socially adept.

- Overall Assessment: Some indicators suggest this area needs improvement.
- 76% of students and 81% of parents are satisfied with the amount of time the student spends in non-academic social activities while at school (examples include chat room, socializing, surfing, etc.).
- 87% of students and 88% of parents are satisfied with the amount of time the student spends in non-academic social activities while outside of school (examples include hobbies, sports, social activities, volunteer work, etc.).
- 57% of students, 65% of parents, and 68% of teachers feel that students are improving in the ability to 'get along with others.'
- Comments from parents and teachers suggest that online education needs to improve the opportunities for students and teachers to interact.

Outcome 5: Online Education is valued as an alternative delivery model.

- Overall Assessment: Most indicators suggest that this outcome is being achieved.
- 92% of students, 99% of parents, and 98% of teachers agree that the online school is a valuable delivery method for education.
- 69% of students and 81% of parents feel that for them, online education is somewhat or much more effective than a 'regular' school setting. Thirty-six percent (36%) of teachers feel that online education is more effective for students.

- Retention rates in online education are approximately 50%. However, since some students do not intend to stay in online education for more than just the one or two courses they need, and some online education programs encourage students to return to the 'regular' program, retention data may not be a valid performance measure.

Following from the indicators above and other research findings, the following themes were identified as possible areas for planning attention:

- Increase the online education student participation rates for Provincial Achievement Tests.
- Improve online education student achievement in Mathematics and the sciences, particularly at the grade 9 and grade 12 levels.
- Related to online education student achievement in Mathematics and Science, further research should be conducted to explore the dynamics of relatively lower achievement, and planning attention should be focused on exploring opportunities for improving online delivery of Mathematics and Science.
- Conduct research to understand why differences exist between virtual students' school-awarded and Diploma Examination results. School-awarded marks and Diploma Examination marks should reflect all aspects of learning in a course. Although differences can be expected between a student's school-awarded mark and that student's Diploma Exam mark, large differences between the two marks for groups of students should be investigated.
- Increase understanding, perhaps by further research, the issue of social interaction and social skill development in online education.
- Increase the opportunities in online education for face-to-face interaction for students and teachers.
- Improve methods for monitoring and controlling students' completion of course work.
- Enhance support for teachers with online education course and curriculum development.
- Improve the coding and tracking of online education students to improve the reporting and analysis of student achievement, retention rates, and other factors.
- Consider a communication plan to inform educators, students, and the public of the role / value of online education.
- Student achievement can be understood in the aggregate but also through individual success. To better comprehend the impact of online education on individual student achievement, that future research examine individual student success over specific periods ensuring that individual characteristics and prior academic success are accounted for.

- To better understand the impact of online learning upon future student achievement that a longitudinal studies be initiated to track individual student achievement both during their public school careers and postsecondary studies.

B. Introduction and Background

B.1 Overview

Online distance education in Alberta evolved from traditional distance education programs that began in 1923. *Today, distance learning is moving from being print-based and dependent on mail deliveries to an emphasis on new learning technologies, including a variety of computer-mediated communications, audio and video programming, web-based resources and CD-ROMs*[1].

The number of students enrolled in online education programs in Alberta has grown rapidly since the introduction of the programs in the mid 1990s. Today, over 4,000 students are involved in Alberta online education initiatives. Many of Alberta's 60 school jurisdictions either run a "virtual" school or are partnered with another jurisdiction to provide online education services.

While nearly all school jurisdictions in Alberta are involved in some way in online education, there are approximately 20 schools or programs that deliver instruction online in a number of models and formats. On one end of the spectrum, *virtual or online schools* deliver complete programs online and have school status. *Online education programs*, on the other hand, offer a limited number of courses to supplement the conventional course offerings at a conventional school. A detailed description of the various programs and schools in Alberta can be found in the document: *Online Learning: Best Practices for Alberta School Jurisdictions*.[2] A list of Alberta-based online education programs is contained in appendix B of this report.

With the rapid growth and evolution of online education, a need was recognized to understand the strengths and challenges inherent in this area. To this end, the Alberta Online Consortium (AOC) with support from Alberta Learning commissioned a research study to assess the performance of virtual schools and student achievement in virtual schools. This report is a summary of the findings of this research study.

[1] Alberta Learning (1999) *Online Learning: Best Practices for Alberta School Jurisdictions.* Available on the Internet at: http://www.learning.gov.ab.ca/technology/bestpractices/
[2] IBID

B.2 Study Definitions and Objectives

Alberta Learning defines an on-line or virtual program as *a program offered by a school delivered electronically at a school site or off campus, under the instruction and complete supervision of a certificated teacher of a board or an accredited private school*.[3]

For this study, online education uses a similar definition:

- Online education: One or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.

The major difference in the two definitions is that this study's definition includes only those courses or programs that are delivered over the Internet where the teacher and student are in a different location.

The two following definitions are also central to this study:

- Regular School or Schooling: K-12 courses taught by teachers in a school setting with other children.
- Home School or Schooling: K-12 courses taught by a parent in the home setting.

The overall objective of this research study is to assess what online education programs in Alberta are doing well and where improvements can be made. Specifically, the research seeks to quantify outcomes, issues, challenges, and opportunities surrounding virtual education. Further, the results of the research are to provide insight into the 'state' of virtual education in Alberta and suggest priorities for further analysis and decision-making.

The research advisory committee of the Alberta Online Consortium (AOC) established a set of outcomes and indicators as reference points for measurement purposes. The framework draws on a number of outcomes and indicators to reflect the distinct elements of online education and its students. Table B.2a on the next page outlines this framework.

[3] Alberta Learning *Funding Manual for School Authorities in the 2000/01 School Year* page 212 Available at: http://www.learning.gov.ab.ca

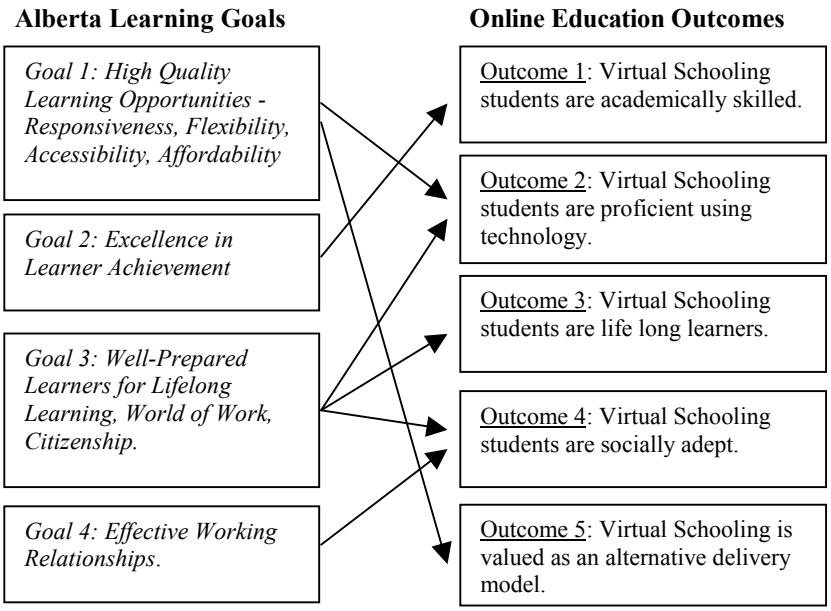
Table B.2a: Online education outcomes and indicators

Outcome 1: Online Education students are academically skilled.	
Indicator	**Related Measurement Elements**
• Provincial achievement test and Diploma Exam results. • Comparison between past and current academic performance of online education (OE) students. • Satisfaction of OE students and parents with academic outcomes and instruction.	• Critical thinking/analysis leading to informed choices. • Problem solving abilities. • Research skills. • Resourcefulness.
Outcome 2: Online Education students are proficient in technology.	
Indicator	**Related Measurement Elements**
• Percentage of OE students who meet and exceed Information and Communication Technology (ICT) outcomes. • Satisfaction of OE students and parents with student achievement of ICT outcomes and availability of technology.	• Ability to evaluate knowledge sources. • Proficiency in accurate and appropriate use of technology/tools. • Producers/creators (not just consumers) of knowledge.
Outcome 3: Online Education students are lifelong learners.	
Indicator	**Related Measurement Elements**
• Percentage of OE students who complete courses and programs. • OE student, parent and teacher perception regarding student level of comfort in pursuing learning opportunities.	• Openness/adaptability to change. • Self-reliance. Self-direction. • Time management skills. • Awareness of personal learning style. • Knowledge and application of blended learning methods. • Preparedness to find/create a vocational niche consistent with personal goals, training, and experience.
Outcome 4: Online Education students are socially adept.	
Indicator	**Related Measurement Elements**
• Perception of OE students, parents and teachers with student involvement/collaboration in non-academic activities within the school and community.	• Global perspective. • Propensity for responsible citizenship. • Self-confidence/emotional security. • Communication skills. • Team and relationship building skills. • Productivity.
Outcome 5: Online Education is valued as an alternative delivery model.	
Indicator	**Related Measurement Elements**
• Number of students in OE programs in Alberta and outside of Alberta. • Retention rate of students in Online Education programs and courses. • Perception of OE students and parents, and of teachers (who teach in both a 'regular' and OE environment) regarding the value of Online Education.	

The above framework was used to guide development of the research instrument and was also used to guide the outline of this report.

The framework of outcomes in the above table aligns well in the context of the broader framework for education planning in Alberta. Table B.2b below demonstrates the linkage between the outcomes and indicators in the above table and the goals of Alberta Learning.

Table B.2b: Linking Alberta Learning goals to online education outcomes



B.3 Study Methodology

B.3.1 Background

As online education is a relatively new and quickly evolving phenomenon, a review of recent research and current practice was undertaken to provide a context for the methodology of this study. The researcher also examined several Alberta Learning publications pertaining to education planning and technology integration into teaching and learning. The following table outlines the documents reviewed and people interviewed.

Documents Reviewed:

- Information and Communication Technology, Kindergarten to Grade 12: An Interim Program of Studies, June 1998, Alberta Learning.
- Learning Technology in Alberta's Schools - Information for Parents, September 1999, Alberta Learning.
- Developing a Three-Year Technology Integration Plan: A resource, April 1998, Alberta Learning.
- FOIP and Technology, Best Practices for School Jurisdictions, February 1999, Alberta Learning.
- Preparing to Implement Learner Outcomes in Technology, Best Practices for School Jurisdictions, February 1999, Alberta Learning,
- Online Learning, Best Practices for School Jurisdictions, March 1999, Alberta Learning.
- Guide for School Board Planning and Results Reporting, March 2000, Alberta Learning.
- Learning Business Plan 1999-2000 to 20001-02 Restated, November 17, 1999, Alberta Learning.
- Teachers' Perspectives of Online Education in Alberta-Preliminary Results of Recent Doctoral Research, Bill Muirhead, 1999 AOC Online Learning Symposium presentation.
- Virtual Schooling in the K-12 Context: A Thesis Submitted to the Faculty of Graduate Studies in Partial Fulfilment of the Requirements for the Degree of Doctor of Philosophy, Rosina Smith, December 2000.
- Linking The Literature: School Effectiveness and Virtual Schools, A report prepared for The Society for the Advancement of Excellence in Education, August 1999.

Communication With:

- Dr. Rosina Smith, Acting Director, Centre for Gifted Education, University of Calgary.
- Dr. Margaret Haughey, Department of Educational Policy Studies, University of Alberta.
- Dr. Bill Muirhead, Executive Director, Alberta Online Consortium.
- Dr. Terrence Wendel
- Dr. Kathryn Barker, President, FuturEd™.
- Dr. Ron Cammaert, Assistant Director, Analytic Services, Student Evaluation Branch, Alberta Learning.
- Ms. Paulette Hanna, Superintendent of Schools, East Central Alberta Catholic Schools.
- Mr. Leo Beaudry, Principal, St. Gabriel Cyber School.
- Ms. Irene Long, Principal, School of Hope.
- Ms. Cathy Faber, Superintendent, Chinook College /Online High School Program, Calgary Board of Education.
- Ms. Margaret Richardson, Principal, Golden Hills Virtual School.

B.3.2 Overview of General Methodology

To meet the objectives of this research, a separate survey was administered with students, parents, and staff who are involved in online education in Alberta. The survey was conducted on the World Wide Web during the period of November 3rd and December 8th, 2000. A survey methodology was chosen because it met several criteria of the project as follows:

- By its nature, performance measurement research seeks to measure outcomes on a known or hypothesized set of criteria. A quantitative approach (measuring how much) is the most logical choice given that performance measurement seeks to quantify these outcomes.
- The indicators of performance and related measurement elements guiding this research listed a number of satisfaction or perception items (see table B.2a). A survey is ideal for gathering this type of information.
- The research objective of assessing the performance of online education in Alberta suggested that a large sample representing the variety of programs in the province be examined. Surveying on the World Wide Web is a particularly effective and efficient method to select large samples from a wide geographic area.
- Online education students, teachers, and most parents involved in online education use the World Wide Web on a daily basis. As such, surveys conducted over the Web fit the respondents' habits and are convenient for them.

A survey of online education administrators was also conducted. The objective of this short Internet survey was to gather information on student retention and course completion rates in online education courses and programs.

In addition to the surveys, data from Provincial Achievement Tests and Grade 12 Diploma Exams were examined for the 1998/1999 and 1999/2000 school years. Data from these standardized achievement tests were examined to give a perspective on online education student achievement.

B.3.3 Sample Design and Sample Frame

The target groups for this study were parents, students, and teachers involved in online education from an Alberta-based provider. The following definitions were used to specify the target populations:

- Online education: *One or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.*
- Online education student: *Students in grades 6 - 12 taking online education from an Alberta-based provider at the time of the research.*
- Online education parent: *The parent of an online education student(s). If applicable, the parent who supervises the student completed the survey. If there were more than one student taking online education in the household, the parent was asked to reference the student with the most recent birthday.*
- Online education teacher: *All Alberta-certified teachers who are instructing online courses at the time of the research.*

The sample frame (the list from which the sample is chosen) was the list of Alberta online education providers found at the Alberta Online Consortium website (www.albertaonline.ab.ca). Each provider was contacted directly to discover if they qualified for inclusion in the study. Of the 19 programs listed on the website, 14 were included in the study. The two main reasons for excluding the 5 other programs were that the program did not fit the study's definition of online education, or the program was in the developmental stage and did not have students enrolled in courses at the time of the study.

All students, parents, and teachers in each of the programs in the sample frame were invited to participate in the study. A decision to invite all potential respondents was made to maximize the final sample size and to increase the probability that the final sample would have representation from all the online education programs in Alberta.

The response rate from teachers was the strongest at 61%. The teacher response rate is similar to that experienced in pencil and paper satisfaction surveys with teachers and was in line with expectations of about a two-thirds response rate[4]. The response rate from parents, at 17% was lower than the 40% expected. Since the survey was conducted online, the lower parent response rate may be reflective of the online activity of parents. The final samples are shown in table B.3.3a.

[4] On self-completion surveys in 23 Alberta school jurisdictions conducted by the author, parent response rates are typically 25%-40% and staff response rates are 60% to 75% on surveys asking similar questions.

Table B.3.3a: Overall Survey Return Rate

Group	Number of possible respondents	Number of completed surveys	Return rate
Online education students	4,061	908	23%
Online education parents	3,233	557	17%
Online education teachers	292	177	61%

Several online education programs are partnerships between jurisdictions, and most programs have students from many areas of the province. Given these facts, the sampling process used ensured that students from all Alberta jurisdictions and areas of the province were included in the study. As the following table shows, the final sample has representation from most of the participating online education programs.

Table B.3.3b: Survey representation from each online education program

Online Education Program Name	2000/2001 Enrolment [note 1]	% Of Province	% From program		
			Student (n=908)	Parent (n=557)	Teacher (n=177)
ADLC Online School	470	11.7%	17%	17%	16%
Argyll/LearnNet On-Line	567	14.1%	1%	8%	8%
Battle River Online [note 2]	54	1.3%	2%	2%	3%
Chinook College	350	8.7%	6%	0%	10%
Golden Hills Virtual School	67	1.7%	3%	3%	2%
St. Gabriel Cyber School	435	10.8%	8%	7%	5%
Holy Family CyberHigh	170	4.2%	2%	3%	5%
InterEd [note 3]	31	0.8%	7%	2%	2%
The Learning Line	34	0.8%	1%	1%	2%
Peace Academy of Virtual Education [note 2]	84	2.1%	3%	6%	2%
School of Hope	1,062	26.4%	20%	20%	28%
St. Paul's Academy [note 3]	400	9.9%	15%	22%	7%
St. Paul Alternate Education Centre	53	0.5%	1%	0%	2%
Rocky View Virtual School	283	7.0%	13%	9%	8%
Total	4,061	100%	99%	100%	100%

Note 1 Enrolment of grade 6-12 students.
Note 2 Parent return rates are estimated since password codes were the same.
Note 3 Student return rates are estimated since password codes were the same.

With a few exceptions, the response rate from each jurisdiction was generally similar to their proportion of provincial online enrolment. For example, St. Gabriel Cyber School has 10.8% of online students in the province and contributed 8% of the student sample. This distribution suggests that the sample represents a provincial picture of online education.

B.3.4 Survey Instrument Design

The instrument development process began with a detailed review of the study objectives, the outcomes and indicators of online education performance, and the related measurement elements outlined in the study request for proposal and shown previously in table B.2a of this report. Other performance measurement related instruments that have been recently used to measure similar constructs both in online and traditional education were also reviewed.

The three main sources referenced for survey instrument design purposes were:

- Survey instruments used in several educational research studies performed by Schollie Research & Consulting over the past 5 years.
- Survey instruments used by Alberta Learning in its annual education satisfaction survey.
- A study in progress being completed by FuturEd™ (www.futured.com) called *Researching Virtual Secondary Schools in Canada*.[5]

Other considerations in instrument development were as follows:

- Instruments were designed with a clean, uncluttered, visually appealing layout with appropriate logos to add visual credibility.
- Most questions were fixed response type (agreement or satisfaction scales or yes/no). A few comment fields were included to gather open-ended feedback on certain issues.
- The instruments were developed so that they would take no longer than about 10 minutes to complete. The average completion time was closer to 15 minutes.
- The instruments and the data collection process were designed to conform to the Freedom of Information and Protection of Privacy Act (FOIPP). That is, information such as names, e-mail addresses, identification numbers, or other personal information was not collected.

Draft survey instruments were presented to the research advisory committee of the Alberta Online Consortium. A number of further revisions and refinements led to the final survey instruments which are shown in appendix A. These surveys were programmed and posted to the World Wide Web.

A pre-test of the survey instruments was conducted with a small number of students, parents, and staff at St. Gabriel Cyber School to test readability levels, comprehension, timing and flow, and interpretation of a number of survey items. Since the pre-test was conducted after the surveys were online, they were also tested for skip patterns, logic, and technical features such as the contingent appearance of respondent comment boxes.

[5] With permission from Dr. Terrence Wendel.

B.3.5 Survey Administration Process

Each online education program administrator in the sample frame was personally contacted to introduce the research, explain the general timelines, and to secure agreement to participate. A letter was also sent from the Alberta Online Consortium (AOC) to each of the 14 online education programs participating in the study, as well as to every Alberta school jurisdiction to explain the research study.

The survey administration process relied on online education program administrators to e-mail or mail passwords, invitations to participate, survey web site addresses, and reminders to all eligible students, parents, and teachers in their program. Invitations to participate were directly mailed to some parents because they could not reliably nor securely be contacted by e-mail.

To make the process of contacting and reminding respondents to participate in the study as easy as possible, customized and detailed instructions and scripts were sent to each online education administrator. The scripts were designed so that administrators simply had to cut and paste them into an e-mail or letter to respondents. Over the period of 4 weeks, responses were monitored daily to ensure that instructions had been carried out on the appropriate dates. Follow-up calls and reminders ensured that all programs completed the notification process.

Passwords were used as a security measure to prevent unauthorized access to the surveys. Each online education program was given one password for each group of students, parents, or teachers. In this manner, individuals were not given unique passwords but some control was maintained over who completed the survey. In addition to this security measure, responses with the same Internet Protocol (IP) addresses were scrutinized to ensure the same individual did not submit them. As a final security measure, return rates were examined to ensure that the number of surveys received from any program did not exceed the number of invitations to participate actually sent out from that specific program.

B.3.6 Methodology Limitations

The methodology used in this research was limited by the following constraints that made the selection of random samples of students, parents, and teachers a challenge:

- Inviting and reminding participants to participate in the study was the responsibility of each online education program as under the Freedom of Information and Protection of Privacy (FOIP) Act, the researcher could not be supplied with sample lists containing names and e-mail addresses. It would not have been practically possible to have each program randomly select study participants and do the follow-up necessary to ensure reasonable completion rates.

- There was a desire for the samples to have representation from all the online education programs in the province and to have a reasonably large sample size. A random sampling of a subset of the population of online education students, parents, and staff would have increased the likelihood that a program would have no representation in the sample. With response rates of approximately 23% for the student survey, and 17% for parent survey, a random sampling process would have created relatively small final samples. Because of the low return rate, the resulting sample, while based on random selection, would still have been subject to substantial non-response bias.
- The schedule for the project allowed three weeks for fieldwork. This time allotment was just long enough to coordinate the 14 online education programs to send out the initial invitations to participate, give time for respondents to do the surveys, and to send out reminders. There was not enough time allotted to make random selections, track returns, and follow up with non-responders to encourage participation.

Since the sample was not chosen randomly, the results of the research cannot be generalized to the population with a known margin of sampling error. The second and related limitation of a self-administered survey is that the sample consists of respondents who chose to do the survey and therefore has self-selection bias. Self-selection biases distort surveys because they over-represent extreme positions while under-representing responses from those who are indifferent.

From a strictly theoretical standpoint, the results of this research should be interpreted as descriptive of the sample rather than predictive of the general population. However, from a practical standpoint, sampling error and self-selection bias decrease substantially as the sample increases in size relative to the population. For example, in the case of the teacher survey these biases are likely relatively small since 61% of the teacher population responded to the survey. With regard to the sample of students and parents, the following evidence suggests that the samples in this study are reasonably representative of the broader population of online education students, parents, and staff:

- Corroborating research findings from other independent research studies that are referenced in the results discussion of this report.
- There is a reasonable match between the sample for this study and the population of online education students on some demographic variables.
- Internal supporting observations. For example, in many instances, parents, students and staff results are consistent with each other.

The use of data from 1998/1999 and 1999/2000 Provincial Achievement Tests (PATs) and Grade 12 Diploma Exams in this study also have some limitations that are outlined below:

- The percentage of online education students writing PATs and Diploma exams is small, increasing the chance for unique characteristics or errors in reporting to have a great impact on the overall scores.
- The data from the provincial exams do not necessarily represent the same group of students as the survey. That is, survey data collected from students in 2000/2001 is being compared to Provincial Achievement Test data collected in the two previous school years.
- The term 'virtual schooling' used for coding students by Alberta Learning is not exactly the same as the study's definition of online education, as the former includes students who take school-based online education (i.e. online course work completed at the school).
- The provincial test data is based on students in grades 3, 6, 9, and 12 whereas the online education survey targeted students in grades 6 to 12.

Despite these limitations, the analysis of the data provides some useful context in which to relate the survey findings.

C. Study Results - Profile of Online Education Survey Respondents

C.1 General profile of online education students, parents, and teachers

Students and parents were asked to indicate their level of involvement in online education and other types of educational delivery. Along with the previously stated definition for online education, the study defines 'regular' schooling as *courses taught by teachers in a school setting with other children* and home schooling as *courses taught by a parent in the home setting.*

The majority of respondents to the survey are involved in online education on a full-time basis.

Table C.1a: Student, parent and teacher involvement in online education

Which of the following best describes your (your child's) online education this year?	Percent of respondents		
	Student (n=908)	Parent (n=557)	Teacher (n=177)
Online education full-time	71%	85%	-
Online education part-time and taking courses in a 'regular' school setting.	17%	7%	-
Online education part-time and not taking other courses in a 'regular' school setting.	12%	8%	-
Teachers: All the classes I teach are online	-	-	80%
Teachers: I teach courses in both online education and in a 'regular' school setting.	-	-	20%

Parents were asked how many children they had in online education, home schooling, and a 'regular' school setting to understand the extent to which families are using multiple education delivery methods. As the table below shows, the majority of households represented in the study use either online education only or a combination of online education and 'regular' schooling.

Table C.1b: Education delivery used in the household

Type of educational delivery method family uses	Number	Percent [1]
Online education only	233	42%
Online education and 'regular' school only	238	43%
Online education and home schooling only	70	13%
Online education, 'regular' school, and home schooling	16	3%
All families	557	100%

Note 1 Total of percents may not sum to 100% due to rounding.

The study was targeted at parents of all children in online education and students in grades 6 to 12. The majority of responses came from students and parents in grades 7-12 which accurately reflects the fact that the majority of online education students are in grades 7-12.

In 2000/2001, the actual distribution of online education students by grade group in Alberta was 8.6% in grades 1-3, 12.9% in grades 4-6, 32.8% in grades 7-9, and 45.6% of students in grades 10-12[6]. While the sample for this study may be slightly over-represented in grades 7-9 and under-represented in lower grades of students and parents, there is evidence to suggest that any bias arising from this would be more negative than positive[7]. The survey response rate by grade is shown in the table below.

Table C.1c: Response by student grade level

	Students		Parents	
Grade Level	Number	Percent	Number	Percent
Grades 1-3	0	0%	4	1%
Grades 4-6	17	2%	37	7%
Grades 7-9	324	36%	256	46%
Grades 10-12	558	62%	258	46%
Total	899	100%	555	100%

With regard to gender, the student survey sample is comprised of 62% female respondents and 38% male respondents. In 2000/2001, the actual distribution of online education students by gender was 51% female and 49% male suggesting that the study sample over-represents females and under-represents males by approximately 11%. It is uncertain whether this gender representation biases the results in any given direction. For almost all questions on this study, there were no differences in results between males and females suggesting that the over-representation by females does not bias the results.

Students and parents were asked where they are currently living to give an indication of the number of out-of-country and out-of-province students and parents in the sample. The vast majority of students (96%) and parents (97%) are Alberta residents with the balance equally split between residents of another province in Canada and a country outside of Canada.

[6] Alberta Learning School Information System database query performed by the Information Access and Reporting branch on data as of January 25, 2001.
[7] In research with 23 Alberta school jurisdictions conducted by the author, satisfaction levels on most dimensions of education are higher in elementary grades and lower in grades 7-12.

Students were asked to indicate their general level of academic performance and parents were asked to indicate the general level of academic performance of their child in online education. As the following table outlines, the sample is weighted toward students with high academic performance with 51% of students and 58% of parents reporting above average or excellent academic performance.

Table C.1d: Student academic performance

How would you describe your (your child's) general academic performance in school?	Students		Parents	
	Number	Percent	Number	Percent
An excellent student	118	13%	116	21%
An above average student	348	38%	208	37%
An average student	411	45%	191	34%
A below average student	31	3%	41	7%
Total	908	100%	556	100%

C.2 Length of time in online education and education taken prior to online education

Respondents were asked how long they have been involved in online education to understand the relationship between this variable and attitudes toward online education. As the following table suggests, approximately half of students are in their first year of online education.

Table C.2a: Length of time in online education

How long have you (has your child) been taking online education? Teachers: Including this year, how many years have you been teaching online courses?	Percent of respondents		
	Student (n=907)	Parent (n=557)	Teacher (n=177)
This is my first year	53%	54%	20%
This is my second year	25%	23%	22%
This is my third year	12%	15%	27%
I have (my child has) been involved for more than three years / I have been teaching more than three years.	9%	9%	32%

To further understand the profile of online education students and parents, the following table shows the type of education used prior to taking online education.

Table C.2b: Type of education taken prior to online education

Before you (your child) started taking online courses, how were you (was your child) taking courses?	Percent of respondents	
	Student (n=907)	Parent (n=557)
Attending a 'regular' school	69%	69%
Home schooling	16%	19%
Distance learning other than online education	7%	4%
Not taking any courses at all	3%	1%
Other (private, special program, combination)	4%	6%

Approximately 70% of students were enrolled in a 'regular' school prior to taking online education and 16% were taking home schooling.

Respondents were also asked what form of schooling they would take if online education were not available. While the majority of students were enrolled in 'regular' programs prior to taking online education, many would not return to a 'regular' school if online education were not available.

Table C.2c: Type of education that would be used if online education not available

If online education were not available, how would you (your child) be taking courses?	Percent of respondents	
	Student (n=907)	Parent (n=557)
Attending a 'regular' school	52%	42%
Home schooling	18%	28%
Distance learning other than online education	24%	22%
Not taking any courses at all	4%	4%
Other (private, special program, combination)	3%	5%

If online education were not available students are somewhat more inclined to choose a 'regular' school than parents, and parents are slightly more inclined toward the home schooling option than students are.

If online education were not available, most students and parents stated they would return to the type of education they were in prior to enrolling in online education. However, of those attending a 'regular' school prior to online education, only 57% would return to a 'regular' classroom if online education were not available, the balance would use another distance method (20%), take home schooling (16%), not take any courses at all (4%), or take another type of schooling (4%). The fact that 4% of students overall indicated that they would not be taking any courses at all if online education were not available suggests that online education is helping to retain students in some form of education.

C.3 Reasons for taking online education

The reasons given for choosing online education were quite widely varied and also varied somewhat between students and parents. As the next table outlines, students' main reasons for choosing online education centered around the flexibility of online education, a learning style match, and not liking the 'regular' school system.

Table C.3a: Reasons given by students for choosing online education

In a sentence or two, please describe your main reason for choosing online education.	Student (n=862)
Wanted to try something new / more flexible	26%
Don't like 'regular' school system	16%
Suits my learning style / no distractions	14%
Like computer style of learning and computers / better option to home schooling or 'regular' schooling	10%
Bullied in school system / less stressful atmosphere / less peer pressure	8%
Parent chose this method / recommended by others involved in online education	7%
Special needs or health concerns	6%
Conflicting courses or needed upgrading	5%
More one-on-one with teachers	3%
Living outside Alberta, unspecified, and don't know	7%

The following sample comments give examples of why students choose online education:

I wanted to try something new that I haven't tried before, and I wanted time to do things at home that I couldn't do being at regular school.

When I was in a regular school setting, things just weren't working for me. My marks were very low and I wasn't getting along with the teachers. We tried this, and it suited me perfectly.

I chose online education because I needed a more flexible schedule. I enjoy the virtual schooling because I can work at my own pace which results in a more relaxing atmosphere.

I was bullied and pushed around viciously in school. I was pulled out of school in grade six and went to a Christian school. There I was still afraid of socializing with kids because I didn't want to get hurt.

It is more structured than home schooling and yet it does not force you through courses just for the sake of getting them done. Teachers will mark assignments and you can get comments from people other than your parents.

I am going to move with my parents to Ecuador and Argentina. I am doing online education so I don't have to worry about new rules and ways of teaching in a new school. This way, I can be anywhere in the world and still stay at the same school.

Parents' reasons for choosing online education focused more on it being a better option than available alternatives, and the perception of a negative atmosphere in 'regular' schools. The reasons parents gave are outlined below.

Table C.3b: Reasons given by parents for choosing online education

In a sentence or two, please describe your main reason for choosing online education.	Parent (n=541)
Better option to other forms of schooling	23%
Negative school atmosphere / peer pressure / online provides a safe environment	19%
No distractions	9%
Special needs or health concerns	9%
Allows for flexibility and freedom	7%
Increased parental control	6%
More one-on-one with teachers	6%
Student chose this method / was recommended by others in online education	5%
Other miscellaneous reasons	15%

The following sample comments give examples of why parents choose online education:

I was weary of the responsibility of doing the teaching myself. One child is special needs, and I couldn't meet them.

We're not happy with regular schools and wanted to try something new.

To get away from bad influences (drugs, dating, swearing…). For my other child he has attention problems, so he has learned to focus in the quiet environment and his self- esteem has boosted tremendously.

It allows my child the ability to strengthen self-discipline skills, and direct her time management to best use her day. I believe that a sound background information technology, along with the other technical and personal management skills she is learning in this medium, will allow her to be better prepared to meet the challenges she will face, moving into a vocational setting - and provide her with important skills to continue the learning process throughout her life.

My son was being bullied to the point of depression. I knew I could help my eldest child do his schooling but wasn't confident enough to actually pick out a curriculum, and then to teach it to him. In virtual school, I can help my child, and still have time for my role as a mother and housewife.

D. Study Results – Outcomes and Indicators

D.1 Outcome 1: Online education students are academically skilled

The following measures were identified as suggestive of students being academically skilled:

- Provincial Achievement Test and Diploma Exam results.
- Comparison between past and current academic performance of online education students.
- Satisfaction of online education students and parents with academic outcomes including critical thinking and problem solving skills.
- Satisfaction of online education students and parents with quality of education and instruction.

D.1.1 Provincial Achievement Tests (PATs) and Diploma Exam Results

In the province of Alberta, the ministry of education (Alberta Learning) requires that all students in grade 3, 6, and 9 write standardized "Provincial Achievement Tests" in each of the subject areas listed in table D.1.1a of this report. Students in grade 12 are require to write standardized "Diploma Exams" for each of the subject areas listed in table D.1.1b of this report. The *Diploma Exam mark* comprises 50% of the weight of the student's final grade in the subject. The final grade is referred to as the *final blended mark.* The other 50% of the final grade – *the school-awarded mark* - is assigned by the teacher and is based on course work[8]. Provincial Achievement Tests and Diploma Exams are reported according to two standards: *the acceptable standard* and the *standard of excellence*. It is a provincial standard that 85% of students or more meet the *acceptable standard* and that 15% or more meet the *standard of excellence.*

Provincial Achievement Test results and Diploma Exam results for the 1998/1999 and 1999/2000 school years were examined to contribute information on the academic achievement of students in online education. Results were compared between students in separate/public non-home education (referred to as non-virtual students in this analysis of PAT and Diploma Exam results) and virtual schooling. It should be noted that the term 'virtual schooling' used for coding students by Alberta Learning is not exactly the same as the study's definition of online education as the former includes students who take school-based online education (i.e. course work completed at the school). Despite this definition difference, the use of standardized achievement data provides a useful context for understanding online education student achievement.

[8] For mature students, the 50/50 formula is only used if the Diploma Exam mark is lower than the school mark. If the Diploma Exam mark is higher, the school mark is disregarded and the Diploma Exam mark is reported as the final grade.

Achievement test participation rates for non-virtual school students ranges from 90% to 96% whereas for virtual school students participation ranges from between 65% and 75%. The difference in participation rates likely arises since most virtual school students are home-based. The relatively lower participation rate for virtual schools suggests that the results may not be reflective of the total population of students.

As the next table shows, the percentage of students achieving the acceptable standard and the standard of excellence on Provincial Achievement Tests (PATs) increased somewhat for both schooling types across most subjects and grades over the past two years. At the acceptable standard, this increase for virtual schooling students was 4% for grade 3 Language Arts, 7.6% for grade 3 Mathematics, and 2.0% or higher for grade 6 Mathematics and grade 9 Mathematics and Science. Increases in the percentage of virtual students achieving the standard of excellence were more dramatic with a 19.5% increase in grade 3 Mathematics and a greater than 6% increase in grade 6 Language Arts, Science, and Social Studies.

Table D.1.1a: Provincial Achievement Test results

Testing Year and Subject Area (number of virtual school students writing). The number of non-virtual school students writing is 34,000 – 39,700 depending on the course.	% Achieving the Acceptable Standard			% Achieving the Standard of Excellence		
	Virtual	Non-Virtual	Differ-ence	Virtual	Non-Virtual	Differ-ence
1998/99 - Grade 3 Language Arts (75)	85.3	88.4	(3.1)	9.3	15.4	(6.1)
1999/00 - Grade 3 Language Arts (75)	89.3	90.5	(1.2)	14.7	18.9	(4.2)
1998/99 - Grade 3 Mathematics (76)	73.7	84.5	(10.8)	11.8	25.0	(13.2)
1999/00 - Grade 3 Mathematics (80)	81.3	87.6	(6.3)	31.3	27.1	4.2
1998/99 - Grade 6 Language Arts (140)	87.1	84.2	2.9	11.4	17.1	(5.7)
1999/00 - Grade 6 Language Arts (141)	88.7	86.2	2.5	19.1	20.5	(1.4)
1998/99 - Grade 6 Mathematics (141)	77.3	83.1	(5.8)	13.5	17.1	(3.6)
1999/00 - Grade 6 Mathematics (147)	79.6	84.1	(4.5)	13.6	17.4	(3.8)
1998/99 - Grade 6 Science (136)	80.9	84.2	(3.3)	14.0	23.9	(9.9)
1999/00 - Grade 6 Science (141)	80.1	84.8	(4.7)	21.3	26.3	(5.0)
1998/99 - Grade 6 Social Studies (136)	81.6	81.6	0	12.5	17.2	(4.7)
1999/00 - Grade 6 Social Studies (145)	83.4	83.9	(0.5)	19.3	20.7	(1.4)
1998/99 - Grade 9 Language Arts (387)	85.5	87.4	(1.9)	11.1	11.8	(0.7)
1999/00 - Grade 9 Language Arts (337)	86.6	89.3	(2.7)	14.8	14.8	0
1998/99 - Grade 9 Mathematics (379)	55.4	72.3	(16.9)	5.5	15.5	(10.0)
1999/00 - Grade 9 Mathematics (363)	57.9	74.4	(16.5)	6.6	16.0	(9.4)
1998/99 - Grade 9 Science (397)	64.0	78.5	(14.5)	6.8	14.8	(8.0)
1999/00 - Grade 9 Science (370)	66.8	79.3	(12.5)	5.9	13.9	(8.0)
1998/99 - Grade 9 Social Studies (398)	74.9	80.3	(5.4)	10.6	17.6	(7.0)
1999/00 - Grade 9 Social Studies (371)	69.3	80.9	(11.6)	7.0	17.7	(10.7)

Note: Students who take courses part-time virtual and part time non-virtual will not be included in this analysis since they are not coded as 'virtual' students.

In general, achievement results for virtual students were comparable to public / separate school students in Language Arts and grade 6 Social Studies and were lower in Mathematics and Science, particularly in grade 9. More specifically, the following points summarize the key observations from the 1999/2000 Provincial Achievement Test scores:

- Language Arts achievement at the acceptable standard is similar for virtual students and non-virtual students across all grades. Achievement for grade 6 Social Studies at the acceptable standard is also similar for virtual students and non-virtual school students.
- The percentage of virtual students achieving the acceptable standard is lower than non-virtual students for all other subject areas and grades. The margin of difference increases to 10% or more in grade 9 Mathematics and Science. The largest variance is in grade 9 Mathematics where 16.5% fewer virtual students achieved the acceptable standard in 1999/00. The percentage of students achieving the acceptable standard in Grade 9 Mathematics and Science is lower than all other subjects/grades for both virtual and non-virtual school students.
- A smaller percentage of virtual school students achieved the standard of excellence than non-virtual school students in all subjects and grades except for grade 3 Mathematics and grade 9 Language Arts. The difference between virtual students and non-virtual school students is 2% or less in grade 6 Language Arts and Grade 6 Social Studies. The difference was 7% or more in all grade 9 subjects except for Language Arts.

Grade 12 Diploma Exam results for the 1999-2000 school year were also examined for virtual and non-virtual school students to provide achievement information for grade 12 students. Diploma Examination results, school-awarded marks, and the final blended marks are examined. Table D.1.1b displays the percentage of students achieving the acceptable standard and the standard of excellence based on *Diploma Exam marks* and table D.1.1c displays the percentage of students achieving the acceptable standard and the standard of excellence based on the *school-awarded mark*. Table D.1.1d shows the percentage of students achieving the acceptable standard and the standard of excellence based on the *final blended mark*. As previously mentioned, the Diploma Exam mark and the school-awarded mark are averaged to produce the final course grade for most students. The reader should be aware that the sample size for virtual students is 60 or less for most subjects and less than 30 for a few subjects such as Physics 30. Statistics based on small samples are generally more sensitive to variations in each element in the sample.

Similar to the PAT results, the Grade 12 Diploma Exam results shown in table D.1.1b suggest that compared to non-virtual schools, virtual schools have substantially lower achievement in Mathematics and the sciences and generally similar levels of achievement in the humanities (English and Social Studies).

Table D.1.1b: Grade 12 Diploma Exam Achievement Results [note 1]

Course (number of virtual school students writing). The number of non-virtual school students writing is 10,700 - 28,000 depending on the course.	% Achieving the Acceptable Standard			% Achieving the Standard of Excellence		
	Virtual	Non-Virtual	Differ-ence	Virtual	Non-Virtual	Differ-ence
1998/99 – English 30 (n=58)	82.8	84.1	(1.3)	12.1	12.1	-
1999/00 – English 30 (n=84)	80.2	87.1	(6.9)	16.0	15.0	1.0
1998/99 – English 33 (n=31)	80.6	84.2	(3.6)	12.9	8.5	4.4
1999/00 – English 33 (n=47)	87.2	85.6	1.6	14.9	7.5	7.4
1998/99 – Mathematics 30 (n=35)	31.4	79.6	(48.2)	5.7	21.9	(16.2)
1999/00 - Mathematics 30 (n=52)	46.2	72.7	(26.5)	11.5	17.9	(6.4)
1998/99 – Mathematics 33 (n=21)	52.4	68.5	(16.1)	19.0	10.6	8.4
1999/00 - Mathematics 33 (n=33)	57.6	74.5	(16.9)	9.1	13.1	(4.0)
1998/99 - Biology 30 (n=33)	69.7	80.7	(11.0)	12.1	23.5	(11.4)
1999/00 - Biology 30 (n=54)	44.4	79.0	(34.6)	3.7	21.5	(17.8)
1998/99 - Chemistry 30 (n=13)	73.9	82.3	(8.4)	13.0	22.1	(9.1)
1999/00 - Chemistry 30 (n=23)	73.9	82.3	(8.4)	13.0	22.1	(9.1)
1998/99 - Physics 30 (n=13)	53.8	85.2	(31.4)	-	29.4	(29.4)
1999/00 - Physics 30 (n=19)	52.6	81.4	(28.8)	26.3	26.2	0.1
1998/99 – Social Studies 30 (n=49)	63.3	82.9	(19.6)	8.2	16.4	(8.2)
1999/00 – Social Studies 30 (n=59)	72.9	81.6	(8.7)	8.5	15.0	(6.5)
1998/99 – Social Studies 33 (n=22)	81.8	79.6	2.2	9.1	9.9	(0.8)
1999/00 – Social Studies 33 (n=60)	78.3	77.5	0.8	6.7	11.7	(5.0)

Note 1: Students in this summary are from Vista Virtual (ADLC), Golden Hills Virtual School, St. Paul's Academy, and Okotoks Distance Education School, School of Hope, and Argyll / LearnNet On-Line. Students who take courses part-time virtual and part time non-virtual will not be included in this analysis.

The following points highlight specific observations regarding Diploma Exam results shown in table D.1.1b above.

- In 1999/00 English 33 and Social Studies 33 achievement at the acceptable standard is similar for virtual students and non-virtual students.
- The percentage of virtual students achieving the acceptable standard is lower than non-virtual students for all other subject areas and grades. The largest margin of difference is for Biology 30, Physics 30, and Mathematics 30 where 34.6%, 28.8%, and 26.5% fewer virtual students respectively achieved the acceptable standard than non-virtual students in 1999/00.
- At the standard of excellence, virtual school students achieved at about the same level or higher than non-virtual school students in English 30/33 and Physics 30 in 1999/00. In all other subject areas, a lower percentage of virtual students achieved the standard of excellence. The margin of difference was highest in Biology 30 (17.8% difference).

- In terms of trends between 1998/99 and 1999/00, the achievement of virtual students relative to non-virtual students has been stable or improving in all courses except for English 30, Mathematics 33, Biology 30, and Social Studies 33.
- A couple of observations contradict the trend that virtual student achievement in Mathematics and Science is generally lower than non-virtual students. First, the percent of students achieving the standard of excellence for Physics 30 was the same as the percent of non-virtual students in 1999/00. Additionally, for Mathematics 33, 8.4% more virtual students than non-virtual students achieved the standard of excellence in 1998/99.

Table D.1.1c displays the school-awarded marks for virtual and non-virtual students.

Table D.1.1c: School-Awarded Mark Achievement Results [note 1]

Course (number of virtual school students writing). The number of non-virtual school students writing is 10,700 - 28,000 depending on the course.	% Achieving the Acceptable Standard			% Achieving the Standard of Excellence		
	Virtual	Non-Virtual	Differ-ence	Virtual	Non-Virtual	Differ-ence
1998/99 – English 30 (n=71)	85.7	93.8	(8.1)	30.4	21.1	9.3
1999/00 – English 30 (n=113)	90.1	94.0	(3.9)	40.7	21.4	19.3
1998/99 – English 33 (n=43)	93.3	85.7	7.6	13.3	5.6	7.7
1999/00 – English 33 (n=57)	95.7	86.5	9.2	23.4	6.2	17.2
1998/99 – Mathematics 30 (n=40)	76.5	91.9	(15.4)	29.4	27.3	2.1
1999/00 – Mathematics 30 (n=70)	94.2	91.3	2.9	30.8	26.2	4.6
1998/99 – Mathematics 33 (n=25)	85.7	84.4	1.3	23.8	12.6	11.2
1999/00 – Mathematics 33 (n=49)	84.8	84.8	-	21.2	13.8	7.4
1998/99 – Biology 30 (n=40)	90.9	93.1	(2.2)	21.2	27.6	(6.4)
1999/00 – Biology 30 (n=64)	86.8	93.8	(7.0)	30.2	29.3	0.9
1998/99 - Chemistry 30 (n=15)	92.3	92.7	(0.4)	69.2	26.0	43.2
1999/00 - Chemistry 30 (n=33)	91.3	92.9	(1.6)	34.8	27.8	7.0
1998/99 – Physics 30 (n=18)	69.2	94.6	(25.4)	23.1	33.3	(10.2)
1999/00 – Physics 30 (n=26)	78.9	94.5	(15.6)	42.1	32.5	9.6
1998/99 - Social Studies 30 (n=61)	85.7	95.5	(9.8)	36.7	23.0	13.7
1999/00 - Social Studies 30 (n=77)	89.7	96.0	(6.3)	29.3	24.0	5.3
1998/99 - Social Studies 33 (n=30)	95.0	87.2	7.8	25.0	6.8	18.2
1999/00 - Social Studies 33 (n=72)	95.0	88.7	6.3	23.3	7.3	16.0

Note 1: Students in this summary are from Vista Virtual (ADLC), Golden Hills Virtual School, St. Paul's Academy, and Okotoks Distance Education School, School of Hope, and Argyll / LearnNet On-Line. Students who take courses part-time virtual and part time non-virtual will not be included in this analysis.

There are several notable differences in achievement when only the school-awarded mark is examined relative to the standards. The following points highlight specific observations regarding school-awarded marks shown in table D.1.1c:

- In 1999/00, English 33, Mathematics 30/33, Chemistry 30, and Social Studies 33 achievement at the acceptable standard is similar or higher for virtual students and non-virtual students. For Biology 30, Physics 30, and Social Studies 30, 7.0%, 15.6%, and 6.3% fewer virtual students achieved the acceptable standard in 1999/00.
- The percentage of virtual students achieving the standard of excellence is higher than non-virtual students for all subjects in 1999/00. The margin of difference is as high as 19% in English 30. This observation contrasts with the Diploma Exam scores where achievement at both standards was lower for virtual students on most subjects.
- In terms of trends between 1998/99 and 1999/00, the achievement of virtual students relative to non-virtual students has been stable or has improved in all courses except for Biology 30 at the acceptable standard.

The percentage of students achieving the acceptable standard based on school-awarded marks is higher than when based on Diploma Exam marks, especially for virtual students. The average gap between the school awarded mark and the Diploma Exam mark is 22.1% for virtual students 10.7% for non-virtual students. The average gap at the standard of excellence is 19.2% for virtual students and 3.7% for non-virtual students. The presence of this gap suggests that virtual school students score relatively poorer on Diploma Exams than they score on the school-awarded portion of the course when compared to their non-virtual counterparts. This is particularly evident in Mathematics and the sciences.

The table on the next page outlines the achievement of virtual and non-virtual students based on the final blended course mark.

Table D.1.1d: Final Blended Mark Achievement Results [note 1]

Course (number of virtual school students writing). The number of non-virtual school students writing is 10,700 – 28,000 depending on the course.	% Achieving the Acceptable Standard			% Achieving the Standard of Excellence		
	Virtual	Non-Virtual	Differ-ence	Virtual	Non-Virtual	Differ-ence
1998/99 – English 30 (n=56)	91.1	94.6	(3.5)	16.1	13.6	2.5
1999/00 – English 30 (n=81)	93.8	95.6	(1.8)	25.9	15.5	10.4
1998/99 – English 33 (n=30)	93.3	91.7	1.6	13.3	4.3	9.0
1999/00 – English 33 (n=47)	97.9	92.5	5.4	21.3	4.1	17.2
1998/99 - Mathematics 30 (n=34)	61.8	89.9	(28.1)	8.8	22.6	(13.8)
1999/00 - Mathematics 30 (n=52)	76.9	86.9	(10.0)	11.5	19.7	(8.2)
1998/99 - Mathematics 33 (n=21)	76.2	81.0	(4.8)	9.5	10.0	(0.5)
1999/00 - Mathematics 33 (n=33)	84.8	84.3	0.5	12.1	11.4	0.7
1998/99 - Biology 30 (n=33)	87.9	90.6	(2.7)	18.2	24.0	(5.8)
1999/00 - Biology 30 (n=53)	77.4	90.8	(13.4)	7.5	23.6	(16.1)
1998/99 - Chemistry 30 (n=13)	92.3	90.8	1.5	23.1	19.3	3.8
1999/00 - Chemistry 30 (n=23)	87.0	91.5	(4.5)	17.4	23.3	(5.9)
1998/99 - Physics 30 (n=13)	61.5	93.0	(31.5)	15.4	29.6	(14.2)
1999/00 - Physics 30 (n=19)	73.7	91.4	(17.7)	26.3	27.6	(1.3)
1998/99 - Social Studies 30 (n=49)	81.6	94.2	(12.6)	10.2	17.9	(7.7)
1999/00 - Social Studies 30 (n=58)	84.5	94.4	(9.9)	15.5	17.2	(1.7)
1998/99 - Social Studies 33 (n=20)	100.0	89.0	11.0	5.0	5.8	(0.8)
1999/00 - Social Studies 33 (n=60)	93.3	88.9	4.4	11.7	6.8	4.9

Note 1: Students in this summary are from Vista Virtual (ADLC), Golden Hills Virtual School, St. Paul's Academy, and Okotoks Distance Education School, School of Hope, and Argyll / LearnNet On-Line. Students who take courses part-time virtual and part time non-virtual will not be included in this analysis.

The averaging of school-awarded and Diploma Exam to show the final blended mark moderates many of the differences in achievement noted between virtual and non-virtual students. The following points highlight specific observations regarding final blended marks shown in table D.1.1d above:

- In 1999/00 English 30/33, Mathematics 33, and Social Studies 33 achievement at the acceptable standard for virtual students is similar to or higher than for non-virtual students. In Mathematics 30, Biology 30, Physics 30, and Social Studies 30 achievement at the acceptable standard was lower for virtual students by a margin of 10% or more.
- In 1999/00 the percentage of virtual students achieving the standard of excellence is similar or higher than non-virtual students for all subjects except Mathematics 30, Biology 30, and Chemistry 30.

In summary, several consistent observations are noted when standardized achievement results are examined across all grades and subjects.

- Compared to non-virtual students, standardized achievement test scores in Mathematics for virtual students is an issue in grades 3, 6, 9, and 12. However, The trend in virtual student standardized achievement test scores for Mathematics from 1998/99 to 1999/00 shows some improvement at the grades 3, 6, and 12 levels relative to non-virtual students.
- In contrast to the above observation, Mathematics 30/33 achievement based on school-awarded marks, at both standards, is similar or higher for virtual students in 1999/00. There is a consistent trend for school-awarded marks to be higher than Diploma Exam marks on almost all subjects for both virtual and non-virtual students. However, this gap between school-awarded and Diploma Exam marks for Mathematics 30 and Mathematics 33 is relatively high at 48% and 27% respectively.
- Relative to non-virtual students, virtual student standardized achievement scores in the sciences is an issue in grade 6. Relative to non-virtual students, scores are also weak in grade 9, and continue to be lower than non-virtual students in grade 12 Biology, Chemistry, and Physics. The trend over the two-year period is stable or improving virtual school student achievement in Chemistry 30 and Physics 30, but declining relative to non-virtual students in Biology 30.
- As observed above regarding Mathematics, virtual student achievement in the sciences based on school-awarded marks is relatively better than when based on Diploma Exam marks. However, achievement based on school–awarded marks in Biology 30 and Physics 30 at the acceptable standard is lower for virtual than non-virtual students by a margin of 7% and 15.6% respectively. In contrast, virtual student achievement at the standard of excellence was higher in 1999/00 for Biology 30, Chemistry 30, and Physics 30.
- Achievement in Language Arts (grades 3, 6, and 9), English 33, and Social Studies 33 is comparable between virtual and non-virtual students. In grade 9 Social Studies and Social Studies 30 however, virtual student achievement at both standards is lower by 5.4%-11.6% in 1999/00.
- Like other subjects, achievement according to school-awarded marks improves for virtual students in English 30/33 and Social Studies 30/33 relative to the Diploma Exam marks. At the standard of excellence, achievement based on school-awarded marks is higher for virtual than non-virtual students for English 30/33 and Social Studies 30/33.

The following comments from students and parents may offer additional insight into the challenges and opportunities students face learning Mathematics and Science online.

Parent: the math course my child is using has helped improve her confidence in her ability to do Math.... She has, in the past, been very intimidated by Math, but now she is not so unsure of herself, she actually has no trepidation when she knows that Math is her next subject!

Parent: Online education is much more effective especially in Math. The CD ROM was a really effective way to teach Math skills and could easily be reviewed over and over again.

Parent: In math on-line education works very well, but if she has a problem that we can't help with it would be nicer to have the in-person help.

Parent: Sr. High school Chemistry, Biology, Physics and Math courses are difficult to teach online without a direct dialogue as well as laboratory supplies. Bio students should learn to use a real microscope and perform dissections not see pictures of them.

Student: The reason I would prefer person-to-person contact for the online course that I'm taking is because it is mathematics. I found that step-by-step explanations are limited and this is important because math has always been a challenge for me.

Student: Because you can ask questions to the teachers but it is not the same as having one there to explain the material to you therefore it is very easy to get lost especially in Math and Science.

Student: It is hard to understand some things like Math and Physics because you cannot talk one on one with a teacher.

Student: Well because in Social and English I think that it is very effective, but in courses like Math and Science it's more hands on and more difficult to learn that way.

Student: I think the only non-effective class on cyber-school is Math. It's too hard to understand without someone actually showing you how to do it.

Student: In school you are shown ways of how to do things. Mathematics for example is hard to learn through the phone or email. I find that I learned better in school for my math.

> *Student: I do learn a lot, but Math 23 is a hard subject for me to learn on my own. If my teacher does not get back to me, I have to ask a friend or my mother to help. They sometimes do not know how to do it either. So I am stuck. The exams in Math 23 are also hard. I am given 60 minutes to write them, and with the process of figuring out the questions on paper, and writing the work and answers down (They are mostly #'s and letters combined) takes more than an hour.*

Consistent with the parent and student comments above and the achievement results observed, recent research by Smith[9] cited the following three factors to explain why virtual school students' achievement in Mathematics is lower than non-virtual school students:

- The instructional design of teaching Mathematics online is an area requiring modification.
- Lack of demonstrations and tutorials and no provision to ask questions at each step of the process of a demonstration.
- The symbolic nature of Mathematics is difficult to capture online.

While many challenges have been identified by the analysis of the standardized achievement test results, it should be noted that the research was conducted during the formative stage of online education development where many new pedagogical models were in development to address the unique nature of online delivery. The number and variety of new pedagogical models presents difficulties in regarding quantitative data as reflecting a homogeneous environment at the time of this study.

The Provincial Achievement Tests and Diploma Exams give an interesting perspective on achievement in online education. However, the results should be interpreted with an awareness of the following limitations:

- The percentage of online education students writing PATs and Diploma exams is small, increasing the chance for unique characteristics or errors in reporting to have a great impact on the overall scores.
- The data from the provincial exams do not necessarily represent the same group of students as the survey. That is, survey data collected from students in 2000/2001 is being compared to Provincial Achievement Test data collected in the two previous school years.
- The term 'virtual schooling' used for coding students by Alberta Learning is not exactly the same as the study's definition of online education, as the former includes students who take school-based online education (i.e. course work completed at the school).
- The provincial test data is based on students in grades 3, 6, 9, and 12 whereas the online education survey targeted students in grades 6 to 12.

[9] Smith, Rosina, Virtual Schooling in the K-12 Context, Doctoral Thesis submitted to the Faculty of Graduate Studies, University of Calgary, December 2000.

D.1.2 Comparison between past and current academic performance of online education students

Students and parents were asked to compare past academic performance with academic performance in online education. As the table below demonstrates, approximately two-thirds of students and parents perceive that there has been an increase in academic performance since enrolling in online education and less than 10 suggest that there has been a decrease in performance.

Table D.1.2a: Academic performance since enrolling in online education

Since you have (your child has) been involved in online education, do you believe your (his or her) academic performance has…	**Student (n=908)**	**Parent (n=557)**
Increased a lot?	32%	33%
Increased a small amount?	32%	35%
Stayed about the same?	28%	27%
Decreased a small amount?	7%	4%
Decreased a lot?	1%	0%

The perceived change in academic performance does not appear to be related to the length of time the student has been involved in online education, however the following relationships were observed:

- There appears to be a relationship between prior academic performance of students and their perceived increase in performance since taking online education. Eighty-five percent (85%) of parents of 'below average' academic performing students reported an increase in their child's academic performance versus 71% of parents of 'average' students and 65% of parents of 'above average' students.
- Parents whose child was previously home-schooled report lower performance increase than parents whose children were in 'regular schools.' Fifty-six percent (56%) of parents whose children were home schooled prior to online education reported an increase in performance in contrast to 72% of parents whose children attended a 'regular' school, used other distance learning methods, or were taking no courses at all. Data from the student survey mirrored this observation in the parent survey.
- A greater proportion of full-time online education students reported an increase in academic performance than students who are part-time online education students (68% full-time versus 46% part-time). This relationship was also observed with the parent results (72% full-time versus 54% part-time).

The majority of reasons given for the performance increase fell into 7 categories that together made up about 90% of the factors responsible for the performance increase. Students and parents were very similar in terms of the relative importance of reasons with 'no distractions' and 'teacher attention' given as the top reasons for increased performance. Increased parental control, supervision, and involvement was mentioned as a factor in increased academic performance in 7% of the comments given by parents and only 1% of comments given by students.

Table D.1.2b: Reasons for academic performance increase

What do you feel is the main reason that your (your child's) academic performance has increased since being involved in online education?	Student (n=792)	Parent (n=630)
No distractions; better focus and concentration.	21%	20%
One-on-one attention, better response time from teacher/ school.	19%	20%
Can work at own pace.	16%	10%
Flexibility and freedom.	14%	9%
Increased self-esteem, confidence, motivation, independence.	12%	12%
Fewer social difficulties (peer pressure, bullying, teasing).	6	10%
Increased parental control, supervision, and involvement.	1%	7%
Percent of reasons in these categories	89%	88%

Note: There were 792 unique comments from 537 students and 630 unique comments from 378 parents. The percentage shown is based on the number of total comments.

The following actual comments provide examples of reasons why students and parents feel students' academic performance has increased:

> *Student: The reason is because I can work at my own pace. Sometimes I may need to read an assignment again and I can do that. Also I am more comfortable asking my teachers any questions that I have because there is privacy.*
>
> *Student: I enjoy working in this setting and the school is so much better than home schooling or public school. They help out all the time and when I need help it surprises me how good they are with things. I have eye problems and can't read a lot and have trouble keeping up, but they have helped me out so much. They work things out so that I can get work done. It's awesome!*
>
> *Student: I think my academic performance has increased using the online education because I do not have to deal with the distractions that go on in a regular classroom; I can work at my own pace. I also don't have to put up with some of the bad behavior that goes on in a classroom, every single day of school. When I do the online work I feel relaxed and not pressured on my schoolwork.*

Student: I don't work well in a teenage environment because I don't fit in at all and I have extreme social difficulties with other students as a result. I have no problem at all with teachers but I do with other students and I don't have that problem in online school because there are no students around to bug me or make fun of me or anything. I am in my own environment and I don't have to worry about others opinions or anything. I can schedule my day as I please and I don't have to worry about bells and being on time. The only times that I have to worry about time at all is when I have to do a test which is due at either three or eleven fifty-nine. So in general I think that I am doing better simply because I am much happier and have better self esteem as well so that I enjoy my work more and I am more willing to do it and try hard.

Parent: She is taking two courses online, Science and Health. She can work at her own speed. Also the materials are well laid out and easily understood. She is free of classroom distractions. She has a facilitator that can help her one-on-one if she needs help. Her online Science teacher is easily available, helpful and very prompt in marking assignments so she has quick feedback on her work before she moves on to the next assignment.

Parent: Online Education is fast, efficient and teachers are available at any times to answer any questions whatever. Not only that but I as a parent can directly supervise his work to make sure it is being done. He emails the results, which is fast and efficient because he can't lose the work.

Parent: My son is very task-oriented, so he succeeds in an online environment because he is able to set his own schedule, within reason, and start and finish assignments in one sitting. Plus, the fact that the online lessons are packaged in discreet units makes them very manageable. He feels a great sense of accomplishment each day as he completes many tasks. This is in direct opposition to regular school where he found it difficult to complete assignments in the prescribed time, so as a task-oriented person, his motivation suffered when his day ended without completion of his work.

Parent: The one on one attention with the teachers that she is getting and also less stress from other students. A better environment, being at home, and self-motivation.

Parent: Accountability and always being in touch with his teacher. The teacher calls when there is a problem, usually within a day or two. Problems therefore are dealt with quickly. Online schooling just works well for us.

While this study found that the majority of students and parents perceived an increase in student academic performance, a recent study[10] of Provincial Achievement Test (PAT) scores of virtual students appears to contradict this perception. The study compared the actual PAT scores of virtual school students to the scores that were predicted based on a regression model built on their past PAT scores. The results suggested that grade 6 and 9 students in virtual schooling have similar levels of achievement as would be predicted in English Language Arts and lower levels of achievement in Mathematics. It would be expected that if there was an actual increase in academic performance it would translate into PAT scores that would be higher than those predicted by past performance. One explanation for the difference between the PAT analysis and the perception of students and parents is that the latter are including other factors such as school attendance or effort expended, in their assessment of academic performance. The assessment of student performance by students and parents may be much broader than achievement test scores.

Regarding reasons given for a performance decrease since being in online education, 25 student comments and 11 parent comments suggested 'lack of student discipline and / or motivation' as the main reason. Other reasons mentioned by students for a performance decrease were:

- 16 students mentioned 'not being used to new medium' (online education) and time-management.
- 10 students mentioned that a 'lack of proactive teacher intervention or timely replies' was a factor.
- Less interaction and explanation from teachers (9 students), too many distractions at home (6 students).

Following are sample comments as to why parents and students feel academic performance has decreased:

> *Student: I learn best from a teacher explaining the lesson to me, not by reading and teaching myself. So I find it more difficult to do distance learning or virtual learning, because I have to teach myself the material. I also tend to procrastinate so I easily fall behind whereas in a classroom setting the teacher keeps the class moving.*
>
> *Student: I was not used to computers so it took a while until I got used to them, and could type faster. This caused me to spend more time on learning how to use it than the amount of time I should have spent on learning new material*

[10] Alberta Learning, Learner Assessment Branch, Student Participation and Achievement by Type of Educational Delivery System, December 2000.

Parent: I believe she doesn't have the friendly competition between peers to do better on tests or peer help in completing assignments or studying. As well, in a regular class setting there is more direct feedback from the teacher to the student.

Parent: With no direct parental supervision at our home during the day, my 14-year-old daughter has been 'distracted'. She is currently learning to set her priorities the hard way (i.e. procrastinating, missing deadlines and losing marks). Hopefully she will "get back on track" fairly soon, or lose the privilege of attending an online school. It is obvious to me now that this setting would be more beneficial to my daughter if I was at home during the day to supervise.

D.1.3 Satisfaction of online education students and parents with academic outcomes

To provide feedback on the satisfaction of parents and students with academic outcomes, a series of questions was asked to understand student and parent opinion on how much the school is helping them improve in certain academic areas.

Table D.1.3a: Student, parent and teacher assessment of skill improvement

How much is your (your child's) online school helping you (him or her/students) improve in the following areas? (3 point scale with 'a lot' 'some' and 'very little' as categories and a 'not applicable / no opinion' category)	Percent of respondents who responded 'a lot' or 'some'		
	Student (n=906)	Parent (n=553)	Teacher (n=177)
Ability to solve problems	90%	97%	97%
Critical thinking	89%	93%	96%
Writing	75%	84%	88%
Reading	76%	89%	92%
Mathematical skills	72%	83%	84%
Speaking	46%	55%	46%
Listening	57%	64%	54%

The highest level of skill improvement was indicated for ability to solve problems and critical thinking. Although teachers and parents indicated higher levels of improvement on these skills than students, each of the three groups rated skill improvement in these areas consistently high.

While still quite high, fewer students, parents, and teachers felt that the school was helping students improve 'a lot' or 'somewhat' in writing, reading, and mathematical skills. It is interesting to note that students' PAT scores, especially in grade 9 Mathematical skills were lower than other subject areas.

The lowest level of improvement rating occurred for speaking and listening skills where a range of 46 to 64 of respondents felt students were improving skills 'somewhat' 'or a lot.'

An examination of skill improvement by other variables shows the following relationships among the various sub-groups of students:

- A higher percentage of students in online education full-time report 'a lot' of skill improvement in each of the areas listed in table D.1.3a than do part-time students. The margin of difference ranges from 10% (for writing) to 21% (for reading).
- Students who have been taking online education for more than one year are more likely than those in their first year to report 'a lot' of skill improvement in writing, reading, mathematical skills, critical thinking, and ability to solve problems. The margin of difference ranges from 10% (for critical thinking) to 17% (for solving problems).
- A greater percentage of students who identified themselves as 'excellent' academic performers indicated 'a lot' of improvement in mathematical skills, critical thinking skills, and problem solving skills than students who identified themselves as 'average' or 'below average' academic performers. The difference between below average and excellent performers ranged from 22% (for solving problems) to 37% (for critical thinking) and between average students and excellent performers ranged from 7% (for solving problems) to 19% (for critical thinking).

A similar analysis of the parent survey results identified the following relationships between skill improvement and other variables:

- A lower percentage of parents who have children involved in home schooling and online education reported 'a lot' of improvement in writing, reading, speaking, listening, and critical thinking than did parents whose children are only involved in online education. The margin of difference ranged from 11% (for reading) to 17% (for writing).
- Parents who home-schooled their children prior to online education were less likely to report 'a lot' of skill improvement in writing (11% less) and reading (10% less) than those parents whose children attended a 'regular' school prior to online education.
- Like students, a greater percentage of parents of full-time online education reported 'a lot' of improvement in all areas than parents of part-time students. The margin of difference ranged from 10% (listening) to 31% (critical thinking).
- Parents of children in grades 1-6 showed higher skill improvement in most areas than parents of children in grades 10-12. The largest difference was that 29% more parents of children in grades 1-6 noted 'a lot' of skill improvement in mathematical skills.
- Like students, parents whose students have been taking online education for more than one year are more likely than those in their first year to report 'a lot' of skill improvement in writing, reading, and critical thinking.

- Like students, parents of 'excellent' academic performers were more likely to indicate 'a lot' of improvement in critical thinking skills and problem solving skills than parents of 'average' or 'below average' academic performers.

D.1.4 Satisfaction of online education students and parents with the quality of instruction

Indication of the quality of instruction was derived from several survey questions including a direct question regarding the quality of teaching. Other questions asked related to satisfaction with overall quality of education and other related measurement elements.

As the table below shows, 97% of students and parents were satisfied with the quality of education overall. A similarly high satisfaction figure was noted with the quality of teaching.

Table D.1.4a: Satisfaction with overall education and the quality of teaching

Overall, how satisfied are you with the quality of education that you (your child) are (is) receiving in your (his or her) online education courses?	**Student (n=908)**	**Parent (n=557)**
Very satisfied	44%	59%
Satisfied	53%	38%
Dissatisfied	2%	2%
Very dissatisfied	1%	1%
Overall, how satisfied are you with the overall quality of teaching provided?	**Student (n=908)**	**Parent (n=557)**
Very satisfied	42%	48%
Satisfied	51%	47%
Dissatisfied	4%	2%
Very dissatisfied	1%	1%
Not applicable or no opinion	1%	1%

Similar to student and parent results, 95% of teachers are satisfied or very satisfied with the quality of education students are receiving.

By comparison, parents' (of K-12 students) satisfaction with the quality of education in Alberta was between 88% and 89% in 1996, 1997, and 1998. High school student satisfaction for the same period ranged between 95% and 97% in the same three-year period[11].

[11] The Government of Alberta's 3-Year Plan for Education 1999/2000 to 2001/2002.

Levels of satisfaction are relatively high across different variables measured in the survey. Overall satisfaction with quality of education and quality of instruction does not appear to vary when examined by other survey variables such as whether the student is full-time or part-time, the grade level, gender, number of years in online education, prior academic performance, or type of education delivery used prior to online education.

When asked why they were dissatisfied with the quality of education, students, parents, and teachers gave reasons that fell into the categories outlined in the table below.

Table D.1.4b: Reasons for dissatisfaction with online education

Student (22 comments)	Parent (17 comments)	Teachers (9 comments)
Lack of teacher-student contact and conversation (9)	Lack of teacher-student contact and conversation (7)	Lack of teacher-student contact and conversation (3)
Not enough online instruction and materials (3)	Technical difficulties; waiting for course material (4)	Courses / curriculum still in development (3)
Too much work/written communication (3)	Courses don't reflect personal / religious values (3)	Lack of group / social interaction (2)
Surveys with miscellaneous comments (7)	Surveys with miscellaneous comments (3)	Delivery of online courses still evolving (1)

The most frequently mentioned reason for dissatisfaction was the lack of student-teacher contact and conversation. The second most frequently mentioned reason differs between the three groups with students mentioning online materials, parents mentioning technical difficulties, and teachers mentioning course and curriculum development. The following comments provide some examples:

> *Student: Lack of teaching student, the teachers just send the work but are not helping the students with understanding.*

> *Parent: I don't think there is enough feedback from teachers. I would like to receive regular updates about my daughter's performance, such as returned assignments. The first time I received feedback from most teachers this year was late October. That's a bit late to radically improve her marks.*

Parents and students were asked a series of agreement statements that are common in performance measurement for conventional education delivery in Alberta. The table below highlights the results from these questions.

Table D.1.4c: Satisfaction with other aspects of online education

For each statement below, please select one circle to show your level of agreement. (4 point agreement scale with a 'not applicable / no opinion' category)	Percent of respondents who strongly agree or agree	
	Student (n=886)	Parent (n=549)
I (My child) know(s) how to get help when I (he or she) need(s) it.	96%	94%
I am (My child is) encouraged to do my (his or her) best.	91%	95%
Teachers provide the help and support I (my child) need(s) to learn.	90%	93%
My teachers (My child's teachers) care about my (his or her) educational progress	89%	93%
I (My child) am (is) clear about what I (he or she is) am expected to learn.	88%	89%
Teachers provide me with regular feedback on my work.	87%	Note
Teachers are available for extra help.	Note	89%
Teachers use a variety of approaches to meet my (my child's) individual learning needs.	80%	79%

Note: Data is not available because the question was not asked of that group.

Student agreement with the above statements varies depending on their assessment of their general academic performance. For example, 91% of students who describe their academic performance as 'excellent' felt that teachers provide regular feedback compared to 73% of students who describe their academic performance as below average. Parents are generally more likely to agree with the above statements if their children are enrolled in online education on a full-time basis.

Also related to the quality of education is the frequency and quality of communication between parents and the online education provider. As the following table indicates, there is a high degree of satisfaction with the quality of communication.

Table D.1.4d: Parent satisfaction with communication

For each statement below, please select one circle to show your level of satisfaction in the following areas. (4 point satisfaction scale with a 'not applicable / no opinion' category)	**Level of child's involvement in online education**		
Percent of parents who are very satisfied or satisfied	**Full-time (n=475)**	**Part-time [1] (n=46)**	**All Parents (n=521)**
The quality of the communication between the teachers and your child.	97%	80%	95%
The frequency of the communication between the teachers and your child.	96%	76%	93%
The way the online school keeps you informed about your child's progress and achievements.	94%	76%	91%
The length of time it takes for online school staff to respond to your questions and concerns.	93%	85%	92%

Note 1: Students are enrolled in online education part time and not taking any courses by other means.

As the table above shows, parents whose children are enrolled in online education part time have lower satisfaction ratings for the communication items above than do parents whose children are enrolled in online education full-time. Satisfaction levels with communication do not appear to be related to other variables such as child's grade level, prior academic performance, or number of years enrolled in online education.

D.2 Outcome 2: Online Education students are proficient using technology

The following measures were identified as relevant indicators of proficiency with technology:

- Satisfaction of online education students and parents with student achievement of ICT outcomes. [12]
- Satisfaction of online education students and parents with availability of technology.

D.2.1 Satisfaction of online education students and parents with the achievement of information and communications technology (ICT) outcomes

The first set of indicators of achievement of ICT outcomes was the assessment of how much the online school is helping students develop technology skills. The table below outlines the results of a series of questions asked to assess how the school is helping students improve ICT skills.

Table D.2.1a: Student, parent and teacher technology skill improvement

How much is your online school helping students improve in the following areas? (3 point scale with 'a lot' 'some' and 'very little' as categories and a 'not applicable / no opinion' category)	Percent of respondents who responded 'a lot' or 'some'		
	Student (n=908)	Parent (n=557)	Teacher (n=177)
Using technology to research an issue	91%	96%	99%
General computer technology skills	89%	96%	98%
Using technology to communicate with others	88%	96%	100%
Using technology to solve problems	86%	94%	96%
Ability to judge information found online	82%	90%	91%

The results in the previous table suggest there is a consistent and strong indication that the online school is helping students improve their skills in technology. As with other results on this question teachers and parents tend to rate the skill improvement higher than the students by a margin that ranges between 5% and 12%.

[12] A complete list of ICT outcomes is available in the Alberta Learning report titled Information and Communication Technology Kindergarten to Grade 12: An interim program of studies, June 1998.

An examination of technology skill improvement by other variables highlights some interesting differences between certain sub-groups of students:

- A higher percentage of students and parents in online education full-time report 'a lot' of skill improvement in each of the areas listed in table D.2.1a than do part-time students.
- Parents of students in grades 1-6 were more likely to indicate 'a lot' of skill improvement for using technology to research an issue (17% more), solve problems (13% more), and general technology skills (10% more) than were parents of students in grades 10-12. The same relationship does not appear to exist in the student survey results.
- Students and parents involved in online education for more than one year were more likely to report 'a lot' of technology skill improvement than those in their first year of online education. The margin of difference ranges from 9% to 19% with many of the larger differences observed in the student results on skills such as using technology to solve problems (19% difference) and to communicate with others (17% difference).
- Like other skill areas, both students and parents were generally more likely to report more skill improvement the higher the student's general academic performance.

Students and parents were asked a second set of questions to provide a further indication of students' technology skills. These questions were directed at students' assessment of their current technology skills rather than their assessment of how much the online school is helping them improve.

Table D.2.1b: Assessment of technology skills

For each statement below, please select one circle to show your level of agreement. (4 point agreement scale with a 'not applicable / no opinion' category)	**Percent of respondents who strongly agree or agree**	
	Student (n=908)	**Parent (n=557)**
I (My child has) have good computer skills	95%	98%
I can (My child can) use the internet effectively to find information and conduct research	93%	96%
I find that I am able to learn a lot on my own in this online course or program	93%	-
I have the technology skills to supervise the online education of my child.	-	86%

Results in table D.2.1b suggest that online education students are proficient using technology. Interestingly, 86% of parents indicated that they felt that their technology skills were adequate to supervise the education of their child.

The technology related measures outlined in table D.2.1b showed no relationship with other variables such as level of involvement in online education, grade level, gender, length of time in online education, or prior education type. However, 16% more 'excellent' students agreed with the statement 'I have good computer skills' than 'below average' students did. Parents of 'excellent' students were 10% more likely to agree or strongly agree with the statement 'my child can use the internet effectively to find information and conduct research' than parents of 'below average' students.

The following survey comments demonstrate student and parent feelings regarding technology skill development:

> *Student: I think that this online school is teaching students technology skills very well. I was Macintosh illiterate before I came on, and I'm very confident on Macintosh now.*
>
> *Parent: Online education has its benefits. Usually the lessons are marked and returned faster than through regular mail. Our children have very good computer skills now. They have access to the Internet in doing research and projects.*

As a related measurement area for assessing technology skills, parents and students were asked how satisfied they were that the online school is teaching the knowledge, skills, and attitudes to live in a changing society. Eighty-nine percent (89%) of students and 90% of parents were satisfied that the school is teaching students the knowledge, skills, and attitudes to live in a changing society, providing another indication that online education students are technologically skilled.

D.2.2 Satisfaction of online education students and parents with the availability of technology

Access to appropriate technology is highly related to the development of strong technology skills and was therefore considered an important measure. The following table outlines satisfaction of parents and students with access to technology and support from the online course provider.

Table D.2.2a: Student and parent satisfaction with technology

For each statement below, please select one circle to show your level of satisfaction in the following areas. (4 point satisfaction scale with a 'not applicable / no opinion' category)	Percent of respondents who are very satisfied or satisfied	
	Student (n=908)	Parent (n=557)
The technology help the online school offers	90%	92%
The software or hardware provided to you (your child)	86%	90%

The results in table D.2.2a were consistently high across sub-groups of respondents. The only exception was that parents of students in full-time online education were more likely to be satisfied with the technology and support than those parents whose children are in online education part-time.

Teacher satisfaction with technology was quite high as well with 90% satisfied with the software or hardware provided to students, and 82% satisfied with the technology help provided to students.

D.3 Outcome 3: Online education students are life-long learners

To assess whether online education is preparing students to be lifelong learners, the following measures and related measurement elements were identified:

- Online education student, parent, and teacher perception regarding student level of comfort in pursuing learning opportunities and the following related measurement elements:
  - Preparedness to find/create a vocational niche consistent with personal goals, training, and experience.
  - Student openness/adaptability to change, self-reliance, and self-direction.
  - Time management skills.
  - Awareness of personal learning style.
- Percentage of online education students who complete courses and programs.

D.3.1 Online education student, parent, and teacher perception regarding student level of comfort in pursuing learning opportunities

The key measure identified under this outcome was the satisfaction of students, parents and teachers that the online school is preparing students for learning and vocational opportunities. To assess this outcome, students, parents, and teachers were asked to what degree they were satisfied that the online school was teaching students the things they need to know. The table below outlines the results of this series of questions.

Table D.3.1a: Student, parent and teacher satisfaction that students are learning what they need to know

How satisfied are you that your (your child's) online school is teaching you (him or her)…(4 point satisfaction scale with a 'not applicable / no opinion' category)	Percent of respondents who are very satisfied or satisfied		
	Student (n=908)	Parent (n=557)	Teacher (n=177)
the knowledge, skills and attitudes required to live in a changing society?	89%	90%	94%
the knowledge, skills and attitudes required for entry into post-secondary education and training?	85%	85%	94%
the knowledge, skills and attitudes required to enter the work place?	83%	84%	89%
the rights and responsibilities of citizenship?	82%	85%	86%

Students and parents that are involved in online education full-time are much more likely to be satisfied with the 4 statements in table D.3.1a than students and parents of students who take online education part-time. The following table outlines these differences.

Table D.3.1b: Student and parent satisfaction that students are learning what they need to know by involvement in online education

How satisfied are you that your (your child's) online school is teaching you (him or her)…(4 point satisfaction scale with a 'not applicable / no opinion' category)	Percent of students who are very satisfied or satisfied	
	Online Education full-time	Online education part-time and 'regular' school part-time
the knowledge, skills and attitudes required to live in a changing society?	93%	77%
the rights and responsibilities of citizenship?	87%	69%
the knowledge, skills and attitudes required to enter the work place?	87%	76%
the knowledge, skills and attitudes required for entry into post-secondary education and training?	87%	81%
	Percent of parents who are very satisfied or satisfied	
the knowledge, skills and attitudes required to live in a changing society?	92%	73%
the rights and responsibilities of citizenship?	89%	62%
the knowledge, skills and attitudes required to enter the work place?	87%	62%
the knowledge, skills and attitudes required for entry into post-secondary education and training?	88%	68%

In addition, three questions were asked regarding students' skills related to pursuing future learning opportunities such as the ability to learn on their own, self-confidence, and time management.

Table D.3.1c: Student, parent and teacher perception of student skill improvement

How much is your online school helping students improve in the following areas? (3 point scale with 'a lot' 'some' and 'very little' as categories and a 'not applicable / no opinion' category)	Percent of respondents who responded 'a lot' or 'some'		
	Student (n=908)	Parent (n=557)	Teacher (n=177)
Ability to learn on your (his or her) own	95%	97%	99%
Self-confidence	77%	91%	94%
Managing time	86%	91%	96%

All groups indicate strong improvement in each of the three areas with 'ability to learn on his or her own' rating highest by all three groups. In each of the skill areas, parents and teachers indicate more skill improvement than students. An examination of other variables suggest the following possible relationships:

- Students are more likely to indicate ' a lot' of improvement in each of the three skill areas in table D.3.1c if they are in online education full-time or if they rate themselves as 'excellent' students. A full 44% more 'excellent' students than 'below average' students indicated 'a lot' of skill improvement in how much the online school is helping them improve time management.
- Parents were more likely to indicate 'a lot' of skill improvement in their child learning on their own if they were in online education full-time, not in their first year of online education, or if they were an 'excellent' student. In terms of self-confidence and time management, parents were more likely to indicate 'a lot' of skill improvement if their child was in online education full-time, in grades 1-6, or not in their first year of online education.
- Like students, parents of 'excellent' students were much more likely than parents of average and below average students to note 'a lot' of skill improvement in time management.

Assessing students' awareness of their personal learning style was accomplished by asking parents and students if teachers used a variety of approaches to meet individual learning needs. Eighty percent (80%) of students and 79% of parents agree that teachers meet individual learning needs. Related to the topic of students understanding their learning styles, 93% of teachers agreed that students have the opportunity to influence the way in which they learn.

D.3.2 Percentage of online education students who complete courses and programs

To gather data on course completion rates, a survey was conducted with the 14 online education program administrators whose students, parents, and teachers participated in the study. Completion rate for courses was defined as the percentage of students who complete (pass or fail) online education courses in the program. Seven of the 14 administrators gave feedback on completion and the highlights are summarized below:

- Estimates of completion rates varied from 70% to 95% of students. Reasons given for low completion rates include characteristics of students that suggest a higher risk for non-completion, lack of understanding of learning expectations, and general student motivation.
- To maintain high completion rates and address low completion rates, administrators cited the following techniques: student screening/testing, student and parent skills training/orientation/information sessions, entry into one or two courses first to test readiness for online education, clear explanation of learning and communication standards and expectations, close monitoring, progress reports, and fast intervention when problems arise.

D.4 Outcome 4: Online education students are socially adept

The following measures and related measurement elements were identified to assess this outcome:

- Perception of online education students and parents with student involvement / collaboration in non-academic activities within the school and community:
- Related measurement elements:
  - A global perspective.
  - Propensity for responsible citizenship.
  - Self-confidence/emotional security.
  - Team and relationship building skills.
  - Productivity.

The related measurement elements above, other than team and relationship building skills, are discussed in previous sections of this report (D.2.1 and D.3.1) as they are linked to outcomes two and three.

To assess the outcome of social adeptness, questions were asked of students, parents, and staff regarding the amount of time students spend in non-academic activities in the school and the community. Students were also asked whether the school is helping them build the skill of 'getting along with others.'

Three-quarters or more students and parents are satisfied with the amount of time students spend in non-academic social activities while at school and in the community. The satisfaction was marginally higher for the amount of time spent outside the online school. The table below outlines the results of the questions regarding time spent in non-academic activities.

Table D.4.1a: Student and parent satisfaction with amount of time students spend in non-academic activities in the school and community

(4 point satisfaction scale with a 'not applicable / no opinion' category)	Percent of respondents who are very satisfied or satisfied	
	Student (n=908)	Parent (n=557)
The amount of time you (your child) spend(s) in non-academic activities while 'at school' (examples: chat room, socializing, surfing, ICQ, etc.)	76%	81%
The amount of time you (your child) spend(s) in non-academic activities outside the online school (examples: hobbies, sports, social activities, volunteer work, etc.)	87%	88%

Students tend to have similar levels of satisfaction regardless of their involvement in online education, academic performance, type of education taken prior to online education, gender, grade level, and number of years in online education. Parents, on the other hand were more likely to be satisfied with the amount of time students spend in non-academic activities while at school if their child was involved in online education full-time or if the student was rated as an 'excellent' academic performer. Parents were more likely to be satisfied with the amount of time students spend in non-academic activities outside of school if they had children in home schooling and online education in their family, if the family home schooled prior to online education, and if the student was rated as an 'excellent' academic performer.

Relative to other areas of skill improvement, a relatively low percentage of students, parents, and teachers felt that the online school was helping students improve 'a lot' or 'some' at the skill of getting along with others. The table below shows these results.

Table D.4.1b: Student, parent and teacher perception of student skill improvement in getting along with others

How much is your online school helping students improve in getting along with others?	Percent of respondents		
	Student (n=904)	Parent (n=553)	Teacher (n=177)
A lot	20%	18%	15%
Some	37%	47%	53%
Very little	29%	23%	28%
Not applicable or no opinion	14%	12%	5%

Full-time online education students and parents were somewhat more likely than part-time students and parents to indicate that the online school is helping them improve in getting along with others. The margin of difference was 15% for students and 22% for parents.

Survey comments from parents and teachers reflect a variety of opinions regarding social skill development. On balance however, relatively more comments reflect a need for opportunities for social skill development. The following are some sample comments made by students, parents and staff on the topic of social skill development and socialization.

> *Teacher: The strength in online learning is the bridge it offers learners to become independent. True strength, however resides in our social skills where we learn how to relate to others, to be interdependent. Online learning does not build those essential social skills.*

Teacher: Regular schooling can provide better opportunities for socialization but online education can better address multiple intelligences. When looking at several aspects of both formats, I am sure that in the best-case scenarios for each, the delivery methods would balance out.

Teacher: The biggest problem I see with online education is a lack of verbal communication and group work which means social skills and speaking skills may not be learned. I think informal and formal speaking skills as well as the skills of sharing opinions, respecting others' opinions, taking turns, encouraging and applauding others' ideas, sharing the work load, solving conflicts amongst people. etc. I think online education can still meet these objectives through call backs and chat line sessions or if the student is in a combined program with a traditional school.

Teacher: I feel that students need more direct interaction with each other. In a classroom setting students learn by helping each other. Online students do not seem to participate with each other nearly as readily and some not at all.

Parent: Online education is definitely more effective for us at this time but socialization is the missing link. Mingling with peers is extremely important in the teenage years. It is an education within itself. It provides real life skills essential to surviving in today's world. Obviously when using online education it is very difficult to get the children together, yet I feel you have provided the best avenues for interaction available considering the system.

Parent: Those whose children are not in the online system think that it is socially crippling to children to be schooled this way, when in actuality it teaches them the necessary social skills and behaviors to excel in life, instead of just going with the flow to fit in.

Parent: My son does not respond well to the kind of socialization he is exposed to in regular school and no amount of cajoling, goading or forcing has been able to change that. Online schooling accommodates my son's academic educational needs. It allows him to 'be' as he is--somewhat antisocial--and still "succeed at school", whereas in regular school he was always getting in trouble. My own life/career shows that he doesn't need conditioning by regular school-type socialization in order to succeed in life (in fact regular school has an effect on him opposite to that desired), and my son expresses no desire to lead the kind of life that would require the kind of malleable, accommodating personality that thrives in regular school.

Student: I think that online schooling needs to have more conferences, (or things that get the home schooling students together) because students are missing out on a lot of socialization. Some students that are being home schooled really need this socialization time because they need to make some nice friends (I know many). The reason why some students are being home schooled is because people tease them and won't be their friend.

Student: I miss social interaction with other kids my age on a daily basis. I only see my family, so it gets boring at home, and I don't want to do my school work.

Student: I find it difficult to know how much work should be completed in a time period without clear deadlines. I also miss the personal interaction with my classmates and teachers.

Student: It doesn't really encourage social interaction. I find bulletin boards fall short of this. You do less oral presentations which could hurt later on if you go to University or take a job where they are needed.

D.5 Outcome 5: Online education is valued as an alternate delivery model

The following indicators were identified to provide feedback on the value students, parents, and teachers place on online education.

- Perception of online education students, parents, and teachers (who teach in both a regular and an online education environment) regarding the value of online education.
- Retention rate of students in online education programs and courses.

D.5.1 Perception regarding the value of online education

When asked about the value of online education, over 90% of students and almost all parents and staff agree that it is valuable.

Table D.5.1a: Perception of value of online education

For each statement below, please select one circle to show your level of agreement. (4 point agreement scale with a 'not applicable / no opinion' category)	Percent of respondents who strongly agree or agree		
	Student (n=908)	Parent (n=557)	Teacher (n=177)
Online education is a good way to take courses	92%	-	-
Online education is a valuable delivery method for the education of children	-	99%	98%

When the percentage of respondents who 'strongly agree' is combined with the percentage that 'agree' to give a total agreement percentage, this total agreement percentage does not vary between subgroups. However, when just the percentage of respondents who 'strongly agree' is examined, several differences are noted:

- Full-time online education students are more likely to strongly agree that online education is a good way to take courses than part-time students (41% strongly agree if part-time versus 59% strongly agree if full-time). Students who have been involved in online education for more than one year and students who rate themselves as 'excellent' are also more likely to agree that online education is a good way to take courses.
- Like students, parents who have children involved in online education full-time are more likely to strongly agree that online education is valuable. Parents who have children only in online education and 'regular' schools are more likely to strongly agree that online education is valuable than are parents who have children in online education and home school programs. Parents of students in grades 1-6 are more likely to strongly agree that online education is valuable than are parents of students in grades 10-12 (80% strongly agree for parents of grade 1-6 students versus 67% strongly agree from parents of 10-12 students).

- Teachers are more likely to strongly agree that online education is valuable if they teach online education full-time than if they teach both online education and in a 'regular' school setting (78% strongly agree versus 58% strongly agree).

A number of teacher comments made reference to the perceived attitudes and opinions of non-online education teachers toward online education. A few examples follow:

> *Frankly, the most pressing issue is being recognized by traditional schools and established teaching communities as a viable alternative to traditional education. We have had students turned away from Forum for Young Canadians because we were told we are not a "real" school - although we teach the same curriculum and have the same standards as any school in the province. This kind of ignorance and fear is what we deal with on a sometimes daily basis.*

> *The most pressing issue is educating the general public (including educators) about the importance and viability of online education. Online schools do educate students and prepare them for the "real" world.*

To provide another indication of the value placed on online education by students, parents, and teachers, they were asked to compare the effectiveness of online education and 'regular' school settings. The majority of students (69%) and parents (81%), and 36% of teachers believe that online education is more effective. Almost half of teachers (46%) felt that online education and the 'regular' school setting are equally effective compared to less than 15% of parents and teachers who indicated this.

The lower percentage of teachers indicating that online education is more effective is at least partially due to the question wording. For students and parents, the comparison of the effectiveness of online education to a 'regular' school setting was framed in relation to their particular situation or needs. The teacher question used the context of students in general.

Table D.5.1b: Perception of the effectiveness of online education compared to 'regular' school

Comparing the general teaching and learning in online education to a 'regular' school setting, would you say that for you (your child) (your students)…	Percent of respondents who strongly agree or agree		
	Student (n=887)	Parent (n=549)	Teacher (n=176)
Online education is much more effective	41%	56%	14%
Online education is somewhat more effective	28%	25%	22%
Online education and 'regular' schooling are equally effective	14%	12%	46%
Online education is somewhat less effective	10%	3%	11%
Online education is much less effective	2%	1%	2%
Not applicable or no opinion	5%	4%	5%

Examining the results in relation to other variables provides some additional insight into this issue:

- A greater percentage of students feel that online education is much more effective than a 'regular' school setting if they are full-time (59% if full-time versus 41% if part-time), or if they are 'excellent' academic performers (64% if 'excellent' compared to 48% if 'average').
- Like students, parents who have children involved in online education full-time are more likely to agree that online education is much more effective (58% of full-time compared to 30% part-time). Parents who have children in online education only are more likely to believe (63%) that online education is much more effective than are parents who have children in online education and home school programs (43%).
- Parents of students in grades 1-6 are more likely to feel that online education is much more effective than parents of students in grades 7-12 (70% if parents of gr. 1-6 compared to 54% if parent of 7-12 students).
- 68% of parents of 'below average' academic performing students believe that online education is much more effective compared to 57% of parents of 'excellent' academic performers.
- 39% of teachers who teach online education full-time feel online education is more effective compared to 28% of teachers who teach in both online education and a 'regular' school setting. Teachers who have been involved in online education for 4 or more years are almost twice as likely to believe that online education is more effective compared to teachers who have been teaching for 1-3 years (53% if 4 or more years versus 29% if 1-3 years)

Respondents were asked why they felt online education was more, equally, and less effective than 'regular' school settings. The top mentioned reasons fell into 8 categories that combined to explain 80%-85% of the reasons. The reasons given, and their order of mention tend to mirror the reasons given for why respondents felt their academic performance has increased since they have enrolled in online education (see table D.1.2.b).

Table D.5.1c: Reasons why online education is more effective than 'regular' school

In a sentence or two, please describe why you think online education is much more or somewhat more effective	Student (n=843)	Parent (n=793)	Teacher (n=105)
No distractions; better focus and concentration.	**20%**	**18%**	8%
Can work at own pace.	**16%**	**12%**	9%
Flexibility and freedom.	**15%**	8%	**24%**
Increased self-esteem, confidence, motivation, independence.	11%	**12%**	**20%**
One-on-one attention, response time from teacher/school.	11%	**13%**	**12%**
Fewer social difficulties (peer pressure, bullying, teasing).	6%	**12%**	5%
Increased parental control, supervision, and involvement.	1%	6%	4%
Students better prepared for future (computer & independence).	2%	4%	2%
Percent of reasons in these categories.	82%	85%	84%

Note: There were 843 unique comments from 610 students, 793 unique comments from 440 parents, and 105 comments from 64 teachers. The percentage shown is based on the number of total comments.

As the table above shows, students, parents, and teachers vary in their reasons given. For example, while 'no distractions' and 'work at own pace' were among the top reasons for parents and students it was not in the top three reasons given by teachers for online education being more effective. The top two reasons for teachers believing online education is more effective were 'flexibility and freedom' and 'increased self-esteem, confidence, motivation, and independence.'

When asked why online education and the 'regular' school setting are equally effective, respondents' reasons fell into three main categories:

- Online education and the 'regular' school setting deliver the same curriculum, just using different methods.
- Each has positives and negatives for different reasons but on balance are equally effective.
- Online education and the 'regular' school setting suit two different learning styles or needs.

When students, parents and teachers were asked why they felt online education was less effective than a 'regular' school setting, there were some differences in reasons given. For students, the number one reason was 'lack of face to face interaction' whereas for parents and teachers, the number one reason was lack of proactive teacher intervention and timely replies. The comments below from a teacher explain what is meant by proactive intervention:

> *I feel that the length of time between realizing a student has misunderstood a concept and correcting that misunderstanding is a detriment to teaching effectiveness.*
>
> *There is little opportunity to help a student as he/she is working on an assignment. Correction is often after the fact.*

The table below outlines the reasons given by respondents for why they believe online education is less effective than 'regular' school settings.

Table D.5.1d: Reasons why online education is less effective than 'regular' school

In a sentence or two, please describe why you think online education is somewhat less, or much less effective	Student (n=104)	Parent (n=19)	Teacher (n=23)
Less interaction / explanation from teachers (no face to face)	**31%**	**11%**	**14%**
Student lacks self-discipline / motivation	**13%**	0%	11%
Lack of proactive teacher intervention; timely replies	**13%**	**21%**	**36%**
Lack of class discussion and interaction	**12%**	**11%**	**18%**
Lack of socializing / personal interaction	8%	**16%**	4%
Lack of 'hands-on' experience provided by in-school learning	7%	5%	0%
Not used to new medium and time-management	1%	**16%**	0%
Too many distractions at home; boredom	3%	**11%**	0%
Inappropriate amount of parental involvement – too much/little	0%	0%	7%
Percent of reasons in these categories.	88%	91%	90%

Note: There were 137 unique comments from 104 students, 19 unique comments from 19 parents, and 28 comments from 23 teachers. The percentage shown is based on the number of total comments.

D.5.2 Retention rate of students in online education programs and courses

To gather information on retention rates, a survey was conducted with the 14 online education program administrators whose students and parents participated in the study. Retention rate for courses was defined as the percentage of students that enroll from one year to the next in their online education program. Online administrators were asked what their retention rates were and how they felt about using this retention data for performance measurement. Seven of the 14 administrators gave feedback on retention rates and the main highlights are summarized below:

- The average 'retention' rate for all programs giving data was approximately 50% based on estimates from 7 online education administrators. This corresponds with the fact that 54% of students in the survey indicated that they were in their first year of online education.
- Students typically leave the online education program because they graduate, move, return to a 'regular' school, or go into the work force. In some instances, students leave because they discover that online education does not match their learning style, or the reason they enrolled is no longer valid. For example, they complete the one course they needed to graduate.
- One challenge with using retention rates as a performance measure is that, where appropriate, some programs encourage students to return to the classroom and thereby encourage low retention. In addition, many students who leave online education return to traditional school settings or other types of education, so although they are not retained in online education, they are retained in the education system.
- A second limitation to the use of retention rates as a performance measure is that many students come to online education as a temporary measure to complete a certain course and then they leave. The results of the student survey indicated that about 5% take online education because of 'conflicting courses or need upgrading' (see section C.3). In this situation, completion of that one course may be a more meaningful measure of success than retention.

Section C of this report also discussed retention. When asked what type of schooling they would take if online education were not available, about 4% students stated that they would take no courses at all. This result suggests that, to some extent, online education is helping retain students in education overall.

E. Summary and Conclusions

E.1 Overall Summary of Outcomes

Most of the outcomes and indicators for assessing the performance of online education suggest that the performance of online education is fairly good. The following points demonstrate this by assigning an overall assessment statement to each of the five outcomes and highlighting the key findings of the study under each outcome:

Outcome 1: Online Education students are academically skilled.

Overall Assessment: Some indicators suggest that this area needs improvement.

- Participation of virtual students in standardized achievement testing is lower than for non-virtual students. Participation rates for non-virtual students ranges between 90%-96% compared to 65% to 75% for virtual students.
- Compared to non-virtual students, standardized achievement test scores in Mathematics for virtual students is an issue in grades 3, 6, 9, and 12. However, the trend in virtual student standardized achievement test scores for Mathematics from 1998/99 to 1999/00 shows some improvement at the grades 3, 6, and 12 levels relative to non-virtual students.
- Relative to non-virtual students, virtual student standardized achievement scores in the sciences is an issue in grade 6. Relative to non-virtual students, scores are also weak in grade 9, and continue to be lower than non-virtual students in grade 12 Biology, Chemistry, and Physics. The trend over the two-year period is stable or improving in virtual school student achievement in Chemistry 30 and Physics 30, but declining relative to non-virtual students in Biology 30.
- Achievement in grades 3, 6, and 9 Language Arts, English 33, and Social Studies 33 is comparable between virtual and non-virtual students. However, in grade 9 Social Studies and Social Studies 30, virtual student achievement at both standards is lower by 5.4%-11.6% in 1999/00.
- Since being in online education, an academic performance increase is reported by 64% of students and 68% of parents whose children are in online education. However, evidence from the analysis of achievement test results based on the prior level of achievement at grades 6 and 9 shows lower than expected results in Mathematics.
- The majority of online education students, parents, and teachers indicate that student achievement of academic outcomes is strong, especially in the areas of critical thinking and the ability to solve problems, where 89% or more felt that the online school was helping students improve their skills. However, just 46% of students felt that the online school was helping them improve speaking and 57% felt their listening skills were improving ‘some’ or ‘a lot’.
- 95% or more students, parents, and teachers are satisfied or very satisfied with the quality of education being received in their online school and over 92% of students and parents are satisfied with the quality of teaching provided.

Outcome 2: Online Education students are proficient in technology.

Overall Assessment: All indicators suggest that this outcome is being achieved.

- Over 90% of online education students, parents, and teachers indicate that the online schools are helping students improve their skills at using technology to research an issue. Over 85% of students and over 90% of teachers and parents feel that students' skills are improving in general technology use and using technology to communicate and to solve problems.
- In terms of current technology skills, 95% of students and 98% of parents feel that students have good computer skills.
- 86% of students and 90% of parents are satisfied with the software or hardware provided by the online school. Additionally, 90% of students and 92% of parents are satisfied with the technology help the school provides.

Outcome 3: Online Education students are life-long learners.

Overall Assessment: Most indicators suggest that this outcome is being achieved.

- 95% of students, 97% of parents, and 99% of teachers feel that students are improving in the ability to 'learn on his or her own.' Over 75% of students, and over 90% of parents and teachers feel that students' ability to manage time and their self-confidence is also improving.
- 89% of students, 90% of parents, and 94% of teachers agree that the online school is teaching students the knowledge, skills, and attitudes to live in a changing society.
- Over 80% of students and parents, and over 85% of teachers agree that the online school is teaching students the rights and responsibilities of citizenship and the knowledge, skills, and attitudes required:
  - for entry into post-secondary education and training.
  - to enter the work place.
- Completion rates for online education courses are anecdotally reported at between 70% and 95%.

Outcome 4: Online Education students are socially adept.

Overall Assessment: Some indicators suggest that this area needs improvement.

- 76% of students and 81% of parents are satisfied with the amount of time the student spends in non-academic social activities while at school (examples include chat room, socializing, surfing, etc.).
- 87% of students and 88% of parents are satisfied with the amount of time the student spends in non-academic social activities while outside of school (examples include hobbies, sports, social activities, volunteer work, etc.).
- 57% of students, 65% of parents, and 68% of teachers feel that students are improving in the ability to 'get along with others.'
- Comments from parents and teachers suggest that online education needs to improve the opportunities for students and teachers to interact.

Outcome 5: Online Education is valued as an alternative delivery model.

Overall Assessment: Most indicators suggest that this outcome is being achieved.

- 92% of students, 99% of parents, and 98% of teachers agree that the online school is a valuable delivery method for education.
- 69% of students and 81% of parents feel that for them, online education is somewhat or much more effective than a 'regular' school setting. Thirty-six (36%) of teachers feel that online education is more effective for students.
- Retention rates in online education are approximately 50%. However, since some students do not intend to stay in online education for more than just the one or two courses they need, and some online education programs encourage students to return to the 'regular' program, retention data may not be a valid performance measure.

E.2 Strengths, Challenges, and Issues Facing Online Education

In addition to the quantitative outcomes outlined previously, comments from survey respondents also reveal that online education is generally doing a good job but there are areas where improvements could be made. All respondents to the survey were asked what they felt the school was doing well and where they felt improvements could be made. The table below summarizes the top areas that are strong and the areas needing improvement:

Table E.2a: Areas of strength and areas needing improvement

What is this online school doing well?		
Student (857 comments)	**Parent (531 comments)**	**Teachers (173 comments)**
Method works for me / I am happy with online education (28%)	Great program / flexible / considerate of family (34%)	Provides excellent education / meets students' needs (53%)
Very flexible and allows me to be more independent (23%)	Great / caring / qualified teachers (19%)	Great communication (18%)
Very organized teachers and support (20%)	Great communication / fast return of marks (19%)	Great student/teacher ratio and opportunity for one-on-one (9%)
Great communication / fast return of marks (14%)	Good variety of programs offered (9%)	Up-to-date technology and good support (6%)
Where does this online school need to improve?		
Student (831 comments)	**Parent (531 comments)**	**Teachers (9 comments)**
Generally happy with the school (15%)	Generally satisfied (18%)	Better technology / fewer glitches (19%)
More teacher interaction / better teachers (15%)	Closer monitoring / better communication (17%)	Teacher/pupil ratio/support for students/better student screening (13%)
Quicker response time / communication (13%)	Technical support / more help for beginners (12%)	Parent and student accountability (12%)
Better computers / web site / technical help (10%)	Need more personal interaction (7%)	Need more online courses / curriculum development (12%)
Need more resources / courses (9%)	More consistent delivery of courses / more courses (7%)	More awareness / try to reach more kids (6%)

In terms of what the school is doing well, most of the comments from students and parents focused on the fact that online education is flexible and met their family and learning needs. The quality of instruction and communication was the second most frequently mentioned student and parent comment on what the online school is doing well. Like students and parents, the majority of teachers commented that the online school provides an excellent education and meets student needs followed by comments regarding good communication.

In terms of where the school needs to improve, comments from students and parents focused on a desire for more teacher interaction and generally better communication between students and teachers. Parents especially felt that closer monitoring of students' work and progress was a necessary change. Technical assistance and technology was also one of the frequently mentioned areas of improvement. Teachers, on the other hand mentioned better technology most frequently as an area needing improvement. In addition, teacher/pupil ratios/support for students, parent and student accountability, and course curriculum development were mentioned as areas needing improvement.

In addition to identifying strengths and weaknesses, parents and teachers were asked to suggest their opinion on what the biggest issue facing their online school is. The table below outlines the issues identified by teachers and parents.

Table E.2b: Biggest issues facing the online school

Parents (500 comments)	Teachers (172 comments)
Keeping updated on technology and computer skills (11%)	Curriculum / course development / updating (18%)
Funding (9%)	Accountability and motivation of students (14%)
Keeping students interested / focused / motivated (9%)	Help and support from ATA / school boards (11%)
Student socialization / interaction / physical education (7%)	Keeping up-to-date with technology and general technology issues (10%)
Communication (6%)	Funding (9%)

From the perspective of teachers the biggest issue facing the school is developing course content material followed by issues surrounding accountability and motivation of students. The following sample comments illustrate these issues:

Resources for obtaining and/or development of relevant and up to date courseware. This is particularly so in areas of curriculum changes i.e. Math.

Some students seem to get lost from the very beginning. There has to be a way of getting students to commit at the beginning of the course. I have too many students that are supposed to be in my course, but I never hear from them.

For parents, the top issues were keeping updated with technology, funding, student motivation, and student socialization. The following sample comments expand further on the issues expressed by parents.

In order to be successful it is very important for parents as well as children to have good computer skills ensuring that they are able to assist the children where needed.

I would say the most pressing issue would be to keep the students interested and working at a steady pace.

I would like to see the government give the school more funding for new textbooks, professional training, hiring more teachers, and better teacher salaries.

There can be problems with kids feeling too secluded from friends.

To continue to provide opportunities for classmates to get together through social functions. They strive to do this very well. It is just hard to get to some of the functions because of the time of day these functions are. We need more after school hours to get to the activities and they are usually scheduled during school hours!

Those whose children are not in the online system think that it is socially crippling to children to be schooled this way, when in actuality it teaches them the necessary social skills and behaviors to excel in life, instead of just going with the flow to fit in.

To summarize, the following areas were identified by the research as areas where online education needs improvement:

- Increased amounts of student to student and student to teacher personal interaction to improve teaching and learning, and student socialization.
- General improvements in the technological aspects of online education and increased technical support and help for beginners.
- Better communication and response times to student and parent questions.
- Better monitoring and accountability in regard to students' completion of course work.
- Curriculum and course development support for teachers.
- Increased funding.

While a small percentage of parents felt improvements should be made in communication and technology, other findings suggest generally high satisfaction with communication and technology (see pages 47, 49, and 51).

The previously cited research by Smith[13] also identified that more face-to face social opportunities were required in online education. Her research also identified that 18% of students felt that the biggest problem with online education was that there was limited face-to-face peer interaction. Further corroboration of the need for curriculum and course development support is found in a study by Muirhead[14] where online education teachers suggested that the responsibility for authoring online course materials, in addition to teaching, was a source of considerable stress.

E.3 Priority areas for Action

This research highlights a number of areas of strength of online education and areas where planning attention may need to be focused. The following themes were identified as areas for attention both with regard to action and additional research:

1. Increase the online education student participation rates for Provincial Achievement Tests.
2. Improve online education student achievement in Mathematics and the sciences, particularly at the grade 9 and grade 12 levels.
3. Related to online education student achievement in Mathematics and Science, research should be conducted to explore the dynamics of relatively lower achievement, and planning attention should be focused on exploring opportunities to improve online delivery of Mathematics and Science.
4. Conduct research to understand why differences exist between virtual students' school-awarded and Diploma Examination results. School-awarded marks and Diploma Examination marks should reflect all aspects of learning in a course. Although differences can be expected between a student's school-awarded mark and that student's Diploma Exam mark, large differences between the two marks for groups of students should be investigated.
5. Increase understanding, perhaps by further research, the issue of social interaction and social skill development in online education.
6. Increase the opportunities in online education for face-to-face interaction for students and teachers.
7. Improve methods for monitoring and controlling students' completion of course work.
8. Enhance support for teachers with online education course and curriculum development.
9. Improve the coding and tracking of online education students to improve the reporting and analysis of student achievement, retention rates, and other factors.
10. Consider a communication plan to inform educators, students, and the public of the role / value of online education.

[13] Smith, Rosina, Virtual Schooling in the K-12 Context, Doctoral Thesis submitted to the Faculty of Graduate Studies, University of Calgary, December 2000.
[14] Muirhead, William, Teachers' Perspectives of Online Education in Alberta, A Thesis submitted to the Faculty of Graduate Studies and Research, University of Alberta, Fall 2000.

Appendix A: Survey Instruments

Alberta Online Consortium

Online Education Student Survey

The Alberta Online Consortium, with support from Alberta Learning, is doing this survey to understand how you feel about your online education. The information is being gathered to understand the strengths of online education and where improvements may need to be made.

Your opinions are very important to us because you are one of a small number of students in online education in Alberta. To make this study a success it is important that all students involved in online education complete this survey.

If you require assistance, please do not hesitate to e-mail Sue_Day_proj578@advanis.ca.

Please enter the password provided to you.

[Login box] **This survey should take approximately 10 minutes to complete.**

Thank you for participating!

Your responses are confidential and anonymous, as they will be combined with results from other students in the province and reported for the province as a whole. When this study is complete the combined results will be available for your review.

For this survey online education or school means: Taking one or more K-12 courses over the Internet from an Alberta teacher. You complete most of the course work in a different location than the teacher

Study independently conducted for the Alberta Online Consortium by

SCHOLLIE Research & Consulting

For this survey online education or school means: Taking one or more K-12 courses over the Internet from an Alberta teacher. You complete most of the course work in a different location than the teacher.

1. Which of the following best describes your online education this year? I take…
   (Please select one)
   __ online education full-time.
   __ online education part-time and also taking courses in a regular school setting.
   __ online education part-time and not taking other courses in a regular school setting.

2. What grade level are the courses that you are taking in online education? If you are taking courses from different grades, choose the grade you are taking most of your courses in.
   Pop-down menu to select a grade between 6-12

3. Are you…
   __ male?
   __ female?

4. How long have you been taking online education?

(Please select one)
   __ This is my first year
   __ This is my second year
   __ This is my third year
   __ I have been involved more than three years

5. Where are you living right now? I live…

(Please select one)
   __ in Alberta
   __ in a Canadian province other than Alberta
   __ in a country other than Canada

6. Before you started taking any online courses, how were you taking courses?

(Please select one)

__ taking “home schooling” and one of your parents was your teacher
__ taking courses using distance learning methods such as mail, fax, etc.
__ attending a regular school
__ not taking any courses at all
__ other (Please specify)_____

7. If online education were not available, how would you be taking courses?

(Please select one)

__ take “home schooling” where one of your parents is your teacher
__ take courses using another distance learning method such as mail, fax, etc.
__ attend a regular school
__ not take any courses at all
__ other (Please specify)_____

8. How would you describe your general academic performance in school? I am…

(Please select one)

__ an excellent student
__ an above average student
__ an average student
__ a below average student

9. a. Since you have been involved in online education, do you believe your academic performance has…

(Please select one)

__ increased a lot?
__ increased a small amount?
__ stayed about the same?
__ decreased a small amount?
__ decreased a lot?

Comment box and the following prompt appear for those who select top or bottom two categories:

b. What is the main reason that your academic performance has [insert answer above] since your have been involved in online education?

10. a. Overall, how satisfied are you with the quality of education that you are receiving in your online education courses?

(Please select one)

__Very satisfied
__Satisfied
__Dissatisfied
__Very dissatisfied

Comment box and the following prompt appear for those who select dissatisfied or very dissatisfied:

b. Why are you [insert answer above] with the quality of education you are receiving in your online education courses?

11. For each statement below, please select ONE circle to show your level of satisfaction in the following areas. (Please select one per row)

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
a) The software and/or hardware provided to you ...	O	O	O	O	O
b) The technology help the online school offers	O	O	O	O	O
c) The overall quality of teaching provided	O	O	O	O	O
d) The opportunity to make choices about the courses you can take.	O	O	O	O	O
e) The amount of time you spend in non-academic activities while 'at school' (examples: chat room, socializing, surfing, ICQ, etc.).....	O	O	O	O	O
f) The amount of time you spend in non-academic activities outside the online school (examples: hobbies, sports, social activities, volunteer work, etc.).....	O	O	O	O	O

12. How satisfied are you that your online school is teaching you…

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
a) the knowledge, skills, and attitudes to live in a changing society?.....	O	O	O	O	O
b) how to be a good citizen?.....	O	O	O	O	O
c) the knowledge, skills, and attitudes to enter the work place?.....	O	O	O	O	O
d) the knowledge, skills, and attitudes for entry into post-secondary education and training? .	O	O	O	O	O

13. How much is your online school helping you improve in the following areas? (Please select one per row)

	A lot	Some	*Very little*	Not applicable or no opinion
a) Writing	O	O	O	O
b) Reading	O	O	O	O
c) Speaking	O	O	O	O
d) Listening	O	O	O	O
e) Mathematical skills	O	O	O	O
f) Critical thinking	O	O	O	O
g) Ability to learn on your own	O	O	O	O
h) Ability to solve problems	O	O	O	O
i) Self-confidence	O	O	O	O
j) Getting along with others	O	O	O	O
k) Managing time	O	O	O	O
l) Using technology to research an issue	O	O	O	O
m) Using technology to solve problems.	O	O	O	O
n) Using technology to communicate with others.	O	O	O	O
o) Ability to judge information found online.	O	O	O	O
p) General computer technology skills	O	O	O	O

14. For each statement below, please select ONE circle to show your level of agreement. (Please select one per row)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not applicable or no opinion
a) Teachers use a variety of approaches to meet my individual learning needs.	O	O	O	O	O
b) I am clear about what I am expected to learn.	O	O	O	O	O
c) I am clear on the rules for the online school. .	O	O	O	O	O
d) I am being encouraged to do my best.	O	O	O	O	O
e) Teachers provide the help and support I need to learn.	O	O	O	O	O
f) Teachers provide me with regular feedback on my work.	O	O	O	O	O
g) I know how to get help when I need it.	O	O	O	O	O
h) My teacher cares about my educational progress.	O	O	O	O	O
i) I can use the Internet effectively to find information and conduct research.	O	O	O	O	O
j) I have good computer skills.	O	O	O	O	O
k) I find that I am able to learn a lot on my own in this online course / program.	O	O	O	O	O
l) Online education is a good way to take courses.	O	O	O	O	O

15. Comparing the general teaching and learning in online education to a regular school setting, would you say that for you …

(Please select one)

__online education is much more effective
__online education is somewhat more effective
__online education and regular schooling are equally effective
__online education is somewhat less effective
__online education is much less effective
__Not applicable or no opinion

16. In a sentence or two, please describe why you think [insert choice from Q15 (skip if n/a is selected or not answered)]?

Text box

17. In a sentence or two, please describe your main reason for choosing online education.

Text box

18. In a sentence or two, please describe what you think this online school is doing well.

Text box

19. In a sentence or two, please describe where you think this online school needs to improve.

Text box

You have completed the survey. You may use the “back” button below to make sure you answered all the questions. Please click the button marked with “end” to finalize the survey.

Schollie thanks you for your time and cooperation.

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Alberta Online Consortium

Online Education Parent Survey

The Alberta Online Consortium, with support from Alberta Learning, is doing this survey to understand how you feel about your child's online education. The information is being gathered to understand the strengths of online education and where improvements may need to be made.

Your opinions are very important to us because you represent one of a relatively small number of families involved in online education. To make this study a success it is essential that all parents who have children involved in online education complete this survey.

If you require assistance, please do not hesitate to e-mail Sue_Day_proj578@advanis.ca.

Please enter the password provided to you.

[Login box] **This survey should take approximately 10 minutes to complete.**

Thank you for participating!

Be assured that your responses are confidential and anonymous, as they will be combined with results from other parents in the province and reported on a provincial basis only. When this study is complete the combined results will be available for your review.

The parent who supervises the child's online education should complete this survey.

For each question, please click on the answer that is your choice.

For this survey we use the following definitions:

- Online education or online school: *One or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.*
- Regular school*: Courses taught by teachers in a school setting with other children.*
- Home schooling*: Courses are taught by a parent in the home setting.*

Study independently conducted for the Alberta Online Consortium by

SCHOLLIE Research & Consulting

For this survey we use the following definitions:

- Online education or online school: O*ne or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.*
- Regular school*: Courses taught by teachers in a school setting with other children.*
- Home schooling*: Courses are taught by a parent in the home setting.*

1. In this school year(2000/01), how many of your children in K-12 are in each of the following types of education? Please enter a number for each. Entering a 0 indicates that you have no children taking that type of education.

Number in online education	____	[SHOULD NOT = 0, IF >1 SHOW EXPLANATION *If you have more than one child involved in online education, please consider the one with the most recent birthday when completing the rest of this survey.*
Number in regular school	____	
Number being home schooled	____	
Total number children in K-12	____	

[If answer for number in online education = 0 then prompt with *You indicated that you do not any children taking online education this year. Please review your answer and change it if you have made a mistake. This survey was intended only for parents of children taking online education.]*

[If total does not equal insert prompt to say: *Your answer for the total number of children must equal the sum of your answers for the number in online education, regular, and home schooled.*]

2. Which of the following best describes your child's online education this year?

(Please select one)

__ Online education full-time.
__ Online education part-time and also taking courses in a regular school setting.
__ Online education part-time and not taking other courses in a regular school setting.

3. What is the grade level of your child who is in online education?

Pop-down menu to select a grade level

__ Grade 1-3
__ Grade 4-6
__ Grade 7-9
__ Grade 10-12

4. How long has your child been taking online education?

(Please select one)

__ This is his or her first year
__ This is his or her second year
__ This is his or her third year
__ Has been involved more than three years

5. Where are you living right now?

(Please select one)

__ in Alberta
__ in a Canadian province other than Alberta
__ in a country other than Canada

6. Before your child started taking any online courses, how was he/she taking courses? (Please select one)

__ taking home schooling
__ taking courses using distance learning methods such as mail, fax, etc.
__ attending a regular school
__ not taking any courses at all
__ other (Please specify)_____

7. If online education were not available, how would your child be taking courses?

(Please select one)

__ take home schooling
__ take courses using another distance learning method such as mail, fax, etc.
__ attend a regular school
__ not take any courses at all
__ other (Please specify)_____

8. How would you describe your child's general academic performance in school? He or she is…

(Please select one)

__ an excellent student
__ an above average student
__ an average student
__ a below average student

9. a. Since your child has been involved in online education, do you believe his or her academic performance has…

(Please select one)

__ increased substantially?
__ increased somewhat?
__ stayed about the same?
__ decreased somewhat?
__ decreased substantially?

Comment box and the following prompt appear for those who select top or bottom two categories:

b. What do you feel is the main reason that your child's academic performance has [insert answer above] since he or she has been involved in online education?

10. a. Overall, how satisfied are you with the quality of education that your child is receiving in his or her online education courses?

(Please select one)

__Very satisfied
__Satisfied
__Dissatisfied
__Very dissatisfied

Comment box and the following prompt appear for those who select dissatisfied or very dissatisfied:

b. Why are you [insert answer above] with the quality of education your child is receiving in his or her online education courses?

11. For each statement below, please select ONE circle to show your level of satisfaction in the following areas.
(Please select one per row)

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
a) The online school is run well	O	O	O	O	O
b) The software and/or hardware provided	O	O	O	O	O
c) The technology help the online school offers	O	O	O	O	O
d) The length of time it takes for online school staff to respond to your questions and concerns .	O	O	O	O	O
e) The way the online school keeps you informed about your child's progress and achievements....	O	O	O	O	O
f) The frequency of the communication between the teachers and your child	O	O	O	O	O
g) The quality of the communication between the teachers and your child	O	O	O	O	O
h) The student to teacher ratio in the online school .	O	O	O	O	O
i) The overall quality of teaching provided	O	O	O	O	O
j) Your opportunity for involvement in decisions that affect education in your child's online school	O	O	O	O	O
k) The amount of time your child spends in non-academic activities while 'at school' (examples: chat room, socializing, surfing, ICQ, etc.).....	O	O	O	O	O
l) The amount of time your child spends in non-academic activities outside the online school (examples: hobbies, sports, social activities, volunteer work, etc.).....	O	O	O	O	O

12. How satisfied are you that your child's online school is teaching him or her… (Please select one per row)

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
a) the knowledge, skills, and attitudes required to live in a changing society?	O	O	O	O	O
b) the rights and responsibilities of citizenship?	O	O	O	O	O
c) the knowledge, skills, and attitudes required to enter the work place?	O	O	O	O	O
d) the knowledge, skills, and attitudes required for entry into post-secondary education and training?	O	O	O	O	O

13. How much is your child's online school helping him or her improve in the following areas? (Please select one per row)

	A lot	Some	*Very little*	Not applicable or no opinion
a) Writing	O	O	O	O
b) Reading	O	O	O	O
c) Speaking	O	O	O	O
d) Listening	O	O	O	O
e) Mathematical skills	O	O	O	O
f) Critical thinking	O	O	O	O
g) Ability to learn on his or her own	O	O	O	O
h) Ability to solve problems	O	O	O	O
i) Self-confidence	O	O	O	O
j) Getting along with others	O	O	O	O
k) Managing time	O	O	O	O
l) Using technology to research an issue	O	O	O	O
m) Using technology to solve problems.	O	O	O	O
n) Using technology to communicate with others.	O	O	O	O
o) Ability to judge information found online.	O	O	O	O
p) General computer technology skills	O	O	O	O

14. For each statement below, please select ONE circle to show your level of agreement.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not applicable or no opinion
a) Teachers use a variety of approaches to meet my child's individual learning needs.....	O	O	O	O	O
b) My child is clear about what he or she is expected to learn.....	O	O	O	O	O
c) My child is encouraged to do his or her best.	O	O	O	O	O
d) Teachers provide the help and support my child needs to learn.	O	O	O	O	O
e) My child knows how to get help when he or she needs it.....	O	O	O	O	O
f) Teachers are available for extra help.	O	O	O	O	O
g) Courses are well structured and focus on getting work done.	O	O	O	O	O
h) My child's teachers care about his or her educational progress.	O	O	O	O	O
i) My child can use the Internet effectively to find information and conduct research.....	O	O	O	O	O
j) My child has good computer skills.	O	O	O	O	O
k) I have the technology skills to supervise the online education of my child.	O	O	O	O	O
l) Online education is a valuable method for the education of children.	O	O	O	O	O

15. Comparing the general teaching and learning in online education to a regular school setting, would you say that for your child…

(Please select one)

__online education is much more effective
__online education is somewhat more effective
__online education and regular schooling are equally effective
__online education is somewhat less effective
__online education is much less effective
__not applicable or no opinion

16. In a sentence or two, please describe why you think [insert choice from Q15 (skip if n/a is selected or not answered)]?

Text box

17. In a sentence or two, please describe your main reason for choosing online education.

Text box

18. In a sentence or two, please describe what you think this online school is doing well.

Text box

19. In a sentence or two, please describe where you think this online school needs to improve.

Text box

20. In your opinion, what is the MOST pressing issue facing education in this online school?

Text box

You have completed the survey. You may use the "back" button below to make sure you answered all the questions. Please click the button marked with "end" to finalize the survey.

Schollie thanks you for your time and cooperation.

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Online Education Teacher Survey

The Alberta Online Consortium, with support from Alberta Learning, is doing this survey to understand how teachers feel about online education. The information is being gathered to understand the strengths of online education and where improvements may need to be made.

If you require assistance, please do not hesitate to e-mail Sue_Day_proj578@advanis.ca.

Please enter the password provided to you.

[Login box] **This survey should take approximately 10 minutes to complete.**

Thank you for participating!

Be assured that your responses are confidential and anonymous, as they will be combined with results from other teachers in the province and reported only a provincial basis. When this study is complete the combined results will be available for your review.

For each question, please click on the answer that is your choice.

> We define an online education program or school as: O*ne or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.*

Study independently conducted for the Alberta Online Consortium by

SCHOLLIE Research & Consulting

Alberta Online Consortium

We define an online education program or school as: O*ne or more K-12 courses delivered over the Internet by a certified Alberta teacher. The student completes the majority of the course(s) physically separated from the teacher.*

1. Which of the following best describes your teaching situation in this school year? (Please select one)
   __ All the classes I teach are online.
   __ I teach both online courses as well as courses in a regular school setting.
   __ All the classes I teach are in a regular school setting.

[note if Q1 selection three is made the respondent may not qualify for the survey. Prompt with: *You indicated that you do not teach online courses this year. Please review your answer and change it if you have made a mistake. This survey was intended for online education teachers.*

2. Including this year, for how many years have you been teaching online courses?
   _____

[note if less than one is made for Q2, prompt with: *You indicated that you have been teaching courses for less than a year. Please include the current year when answering this question.]*

3. a. Overall, how do you feel about the learning expectations of online education students? Learning expectations are…
   (Please select one)
   __ too high
   __ about right
   __ too low

Comment box and the following prompt appear for those who select too high or too low:

b. Why do you feel learning expectations of online education students are [insert answer above]?

4. a. Overall, how satisfied are you with the quality of education that students are receiving in their online education courses?

(Please select one)
__Very satisfied
__Satisfied
__Dissatisfied
__Very dissatisfied

Comment box and the following prompt appear for those who select dissatisfied or very dissatisfied:

b. Why are you [insert answer above] with the quality of education students are receiving in their online education courses?

5. For each statement below, please select ONE circle to show your level of satisfaction in the following areas. (Please select one per row)

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
a) The software and/or hardware provided for students.....	O	O	O	O	O
b) The software and/or hardware provided for teachers	O	O	O	O	O
c) The technology help the online school offers for students.....	O	O	O	O	O
d) The technology help the online school offers for teachers	O	O	O	O	O
e) The frequency of the communication between the teachers and students	O	O	O	O	O
f) The quality of the communication between the teachers and students	O	O	O	O	O
g) The support (e.g. time, money, materials) the online school offers for developing course content.	O	O	O	O	O
h) The quality of the communication between the teachers and parents.....	O	O	O	O	O
i) The learning and / or course materials provided to students.....	O	O	O	O	O
j) The goals, vision, and mission of the online school.....	O	O	O	O	O
k) Overall student achievement	O	O	O	O	O
l) The student to teacher ratio in the online school..	O	O	O	O	O
m) Your opportunity for involvement in decisions regarding your assigned group of students.....	O	O	O	O	O
n) Your opportunity for involvement in decisions regarding your online school.....	O	O	O	O	O
o) The coordination of curriculum across grade levels and subjects	O	O	O	O	O

6. How satisfied are you that the school is teaching students …
(Please select one per row)

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Not applicable or no opinion
e) the knowledge, skills, and attitudes required to live in a changing society?	O	O	O	O	O
f) the rights and responsibilities of citizenship?	O	O	O	O	O
g) the knowledge, skills, and attitudes required to enter the work place?	O	O	O	O	O
h) the knowledge, skills, and attitudes required for entry into post-secondary education and training?	O	O	O	O	O

7. How much is the online school helping students improve in the following areas?
(Please select one per row)

	A lot	Some	*Very little*	Not applicable or no opinion
a) Writing	O	O	O	O
b) Reading	O	O	O	O
c) Speaking	O	O	O	O
d) Listening	O	O	O	O
e) Mathematical skills	O	O	O	O
f) Critical thinking	O	O	O	O
g) Ability to learn on his or her own	O	O	O	O
h) Ability to solve problems	O	O	O	O
i) Self-confidence	O	O	O	O
j) Getting along with others	O	O	O	O
k) Managing time	O	O	O	O
l) Using technology to research an issue	O	O	O	O
m) Using technology to solve problems.	O	O	O	O
n) Using technology to communicate with others.	O	O	O	O
o) Ability to judge information found online.	O	O	O	O
p) General computer technology skills	O	O	O	O

8. **For each statement below, please select ONE circle to show your level of agreement. (Please select one per row)**

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not applicable or no opinion
a) Online education challenges students to do their best.....	○	○	○	○	○
b) Students have the opportunity to influence the way in which they learn.....	○	○	○	○	○
c) A variety of approaches are used to meet each student's individual learning needs.....	○	○	○	○	○
d) You have sufficient resources to provide the help and support students need to learn.....	○	○	○	○	○
e) You have the skills and knowledge to meet students' needs.	○	○	○	○	○
f) There are adequate opportunities for computer-related professional development.....	○	○	○	○	○
g) You have taken a professional development program that helps you better meet students' needs.	○	○	○	○	○
h) Students are clear as to what they are expected to learn.	○	○	○	○	○
i) Online education is a valuable delivery method for the education of children.....	○	○	○	○	○

9. Comparing the general teaching and learning in online education to a regular school setting, would you say that for your students…

(Please select one)

__online education is much more effective
__online education is somewhat more effective
__online education and regular schooling are equally effective
__online education is somewhat less effective
__online education is much less effective
__not applicable or no opinion

10. In a sentence or two, please describe why you think [insert choice from Q9 (skip if n/a is selected or not answered)]?

Text box

11. In a sentence or two, please describe what you think this online school is doing well.

Text box

12 In a sentence or two, please describe where you think this online school needs to improve.

Text box

13 In your opinion, what is the MOST pressing issue facing education in your online school?

Text box

You have completed the survey. You may use the 'back' button below to make sure you answered all the questions. Please click the button marked with "end" to finalize the survey.

Schollie thanks you for your time and cooperation.

SCHOLLIE
Research & Consulting

Alberta
Online
Consortium

Appendix B: Description of Online Education Programs in Alberta

Virtual Schools and Online Programs in Alberta

Alberta Distance Learning Centre formerly Vista Virtual), (Pembina Hills Regional School Division #7)
4801 - 63 Avenue, Barrhead AB T7N 1P4
Ph: (780) 674-5333
Fax: (780) 674-6686

Regional School Division #7)
4801 - 63 Avenue, Barrhead AB T7N 1P4
Ph: (780) 674-5333
Fax: (780) 674-6686
E-mail: rhelder@phrd.ab.ca
URL: http://www.adlc.ab.ca
General Description: The Alberta Distance Learning Centre strives to meet the needs of a variety of students. In many cases ADLC is the school of last resort and therefore must individualize its programs to ensure student success. The following programs will be offered in the 1999-00 school year.

Elementary School:

- Grades 1 to 6 core and supplementary courses are provided using traditional distance education methods.

Junior High School:

- Grades 7 to 9 core and supplementary courses are provided using traditional distance education methods.
- Students at Risk are enrolled in the STAR program that involves regular student-teacher interaction.
- Modified programs are made available where appropriate.
- Summer school in single modules or entire courses are offered where requested.

Senior High School

- Senior high core and supplementary courses are provided using traditional distance education methods.
- A structured summer school program is offered in cooperation with schools.
- A Basic Plus program has been instituted in partnership with schools. This service provides increased teacher-student interaction, mid terms, school awarded mark, and faster turn-around times.

On-line School

- Full-time students are enrolled in Grades 1 to 12 and appropriate hardware, software, learning resources and communication links are provided.
- Contracted Services: Programs are provided in partnership with schools where responsibility for the provision of all resources rests with the schools. At present ADLC Online partners with 70 plus schools in the province.

Calling Lake Virtual School (Northlands School Division #61)
Box 120, Calling Lake AB T0G 0K0
Ph: (780) 331-2050
Fax: (780) 331-2277
E-mail: pault@telusplanet.net
URL: http://www.nsd61.org/virtschl/index.htm

General Description: This is a virtual program that is in the process of becoming a virtual school. This initiative began two years ago in an effort to complement other methods of distance delivery within the Northland high school program. The program offers a partial high school curriculum, primarily intended for school based students.

Through strategic partnerships, the program is expected to grown and develop so that by September 2001 it is able to offer a complete curriculum from grades 4-12. The principal aim of the school division is to be in a position to meet the steadily growing demand for virtual education within its own boundaries. However, the program continues to accommodate a small number of learners from outside the school division.

Battle River Online (Battle River Regional Division #31)
6211 - 48 Avenue, Camrose AB T4V 0K4
Ph: (780) 679-5012
Fax: (780) 679-5013
E-mail: cmos@cmos.org or bryan.laskosky@cmos.org
URL: http://www.cmos.org
General Description: Battle River Online provides a full academic program for grades 7 to 12. The delivery comes in the form of paper and/or online material based on the students needs and wants. Battle River Online is striving to further expand its program with new offerings for the 2000 school year.

Computer Link (Fort McMurray School District #2833)
Beacon Hill School
Beacon Hill Drive, Fort McMurray AB T9H 2R1
Ph: (780) 743-8722
Fax: (780) 743-1287
E-mail: tedg@fmpsd.ab.ca
URL: http://www.fmpsd.ab.ca/schools/bh/bh.htm
General Description: Beacon Hill School has a student population of approximately 270 students from Kindergarten to Grade 8. Part of the school configuration includes the opportunity for children from Grades 4 to 8 to be enrolled in Computer Link Studies and be connected electronically to the school. Students in Grades 1 to 8 have the opportunity to be part of our Fine Arts programs which include choir, band and drama. A wide range of Career and Technology Studies courses are available to Grade 7 & 8 students. Computer Link students are able to blend these and physical education with their electronic studies. For more information call or e-mail us.

Golden Hills Virtual School (Golden Hills Regional Division #15)
Golden Hills Regional Division #15
435A Highway #1, Strathmore AB T1P 1J4
Ph: (403) 934-5121
Fax: (403) 934-5125
E-mail: vssecret@telusplanet.net
URL: http://www.goldenhills-schools.com
General Description: Our emphasis is on a flexible individualized form of education, Gr. 1 - 12, either through distance learning or computerized learning that is geared to the unique circumstances and needs of each student.

Teacher visitations and tutorials are a component of program

instruction. A partnership in learning is formed by parents/students and teachers to set up the program plan. Parents supervise the learning at home under the advisement of specialty area, fully qualified and experienced teachers.

St. Gabriel Cyber School (Red Deer Catholic Regional Division #39)
Ecole Secondaire Notre Dame High School
50 Lees Street, Red Deer AB T4N 6A6
Ph: (403) 343-4800
Fax: (403) 343-2249
E-mail: dkhatib@rdcrd.ab.ca
URL: http://www.stgabrielcyberschool.org (shared with St. Gabriel Cyber School)
General Description: The St. Gabriel School community lives the Catholic/Christian faith in all that it does. Faith is apparent in our prayer life, instruction and interactions between staff and students, as well as between staff and parents. This school is a proud partnership between the St. Albert Catholic School Division and the Red Deer Catholic School Division.

Holy Family Cyberhigh Virtual School (Holy Family Catholic Regional Division #37)
Box 1860 High Prairie AB T0G 1E0
Ph: (780) 523-5237
Fax: (780) 523-4603
E-mail: hfinfo@telusplanet.net
URL: http://www.compusmart.ab.ca/hfcyberhigh
Holy Family CyberHigh exists to explore the concepts of virtual schooling, home-based-learning, and teaching-at-a-distance. Our goal is to bring together the best attributes of home schooling, classroom environments, and professional educators.

Our concept is to provide a traditionally structured virtual learning environment, yet provide enough flexibility to accommodate student and family needs that cannot be fulfilled in a traditional system.

InterEd (Black Gold Regional Division #18)
InterEd Suite 301, 1101 - 5th Avenue, Nisku AB T9E 7N3
Ph: (780) 955-6040
Fax: (780) 955-2913
E-mail: pbalding@blackgold.ab.ca
URL: http://www.blackgold.ab.ca/schools/intered
General Description: InterEd is a program designed to offer the Alberta Learning curriculum using emerging Internet technologies to provide educational opportunities for Grade 7 – 12 students living in the region south of Edmonton.

Argyll/LearnNet On-Line (Edmonton School District #7)
Argyll Home Education Services Centre
8540 - 69 Avenue, Edmonton AB T6E 0R6
Ph: (780) 465-1299
Fax: (780) 465-1328

E-mail: rbradley@epsb.edmonton.ab.ca or bevoy@epsb.edmonton.ab.ca
URL: http://argyll.epsb.edmonton.ab.ca
General Description: The Argyll Home Education Services Centre was established in 1997 by Edmonton Public Schools to serve the needs of home educators. It is a dedicated resource facility for all home-based learning families registered with Edmonton Public Schools. It is the goal of Edmonton Public Schools to be viewed by parents, students and the community as an excellent choice for home education support.
The Argyll Home Education Services Centre offers a variety of programs for students grades 1 - 12 who wish to receive their education outside of the traditional restrictions of time (Monday through Friday from September to June) and space (a school classroom).
The Argyll Home Education Services Centre serves a dual function. It operates as a school in that it can register students and offer student programs. It also serves a district wide function in housing Home Education Services (an Information and referral service provided as a resource for both home educators and district staff).
In its capacity as a site able to register students the Argyll Home Education Services Centre offers several streams of programming.
In keeping with our policy of working with families in a partnership of trust and choice there are many possible program choices within each stream.
Funding is available for families choosing to home educate. Each program stream has had to make choices based on legal requirements and budgetary considerations.
We offer the Alberta Program of studies online grades one through twelve and we supply the computer free of charge.

The Learning Line (Parkland School Division #70)
c/o Broxton Park School
Box 6363, Spruce Grove AB T7X 2Y5
Ph: (780) 962-0212
Fax: (780) 962-0365
E-mail: bbruce@psd70.ab.ca
URL: http://www.caisnet.com/brxsch/title.html
General Description: There are currently two programs being offered through the Learning Line at Broxton Park School: the Learning Line and Learning Partners. The Learning Line is our virtual classroom program that offers programs of study for Grades 1 through 12. Certified teachers are responsible for the delivery of this on-line Alberta Curriculum. Both full time and blended programs are available. The Learning Partners programs also offer programs of study for Grades 1 through 12. In these programs, certified teachers and parents act as partners in the delivery of a more traditional home-based Alberta Curriculum. The materials used in these programs are text-based and chosen by teachers and parents together. Both the Learning Line and the Learning Partners programs allow for the active involvement of parents in the educational programs of their children. We offer flexible programming to assist in meeting the individual needs and lifestyles of families and accommodate variations in learning styles and teaching methods. While students and parents work together at home, they have access to certified teaching staff for instruction, guidance and assistance.

Peace Academy of Virtual Education (Peace Wapiti Regional Division #33)
c/o Peace Wapiti Sub Office
Box 99 Spirit River AB T8V 4C5
Ph: (780) 864-3741

Fax: (780) 864-2488
E-mail: rogerrymhs@pwsb33.ab.ca
URL: http://www.pwsb33.ab.ca/~pave
General Description: The Peace Academy of Virtual Education provides a meaningful and personalized learning experience through a distance education format. This is the second year in which students from Peace River and High Prairie are accessing instruction through P.A.V.E. through a special agreement between the three schools: Peace Academy of Virtual Education, and High Prairie and Peace River School Divisions. Using distance learning materials complete programs for grades four through nine are delivered to students via computers. The Peace Academy of Virtual Education is located in the Peace Wapiti School Board Sub-Office in Spirit River, Alberta.

School of Hope (East Central Alberta Catholic Separate School Regional Division #16)
4820 - 46 Street, Vermilion AB T9X 1G2
Ph: (780) 853-2188
Toll free in Alberta: 1-888-350-HOPE
Fax: (780) 853-4343
E-mail: info@schoolofhope.org
URL: https://www.schoolofhope.org
General Description: We are a Catholic School which welcomes families from all faith backgrounds. Our school serves the educational needs of families in all parts of Alberta. It is our hope that we may also become pathfinders in offering Gospel-centred educational assistance to individuals around the world.
The School of hope is a community of learners sharing in the development of the gifts and talents of each member under the guidance of Jesus Christ, through the Holy Spirit, to the glory of God. Because Home Schooling is a legal provision granting parents the opportunity to educate their children in a home setting, facilitated by a school board (resident or non) and regulated by Alberta Learning, we believe that parents are fully responsible for their children's education and as the School of Hope, we are pleased to be able to be partners in that process. Students throughout Alberta enjoy online home-based education from grades 7 to 12.

St. Gabriel Cyber School (St. Albert Catholic School Division #29)
c/o Vital Grandin School
39 Sunset Boulevard, St. Albert AB T8N 0N6
Ph: (780) 460-4301
Fax: (780) 460-5066
E-mail: lbeaudry@gsacrd.ab.ca
URL: http://www.stgabrielcyberschool.org (shared with Good Shepherd Cyber School)
General Description: The St. Gabriel School community lives its Catholic/Christian faith in all that it does. Faith is apparent in our prayer life, instruction and interactions between staff and students, as well as between staff and parents. In 1995, the Greater St. Alberta Catholic Regional School Division had a vision for the development of virtual online schooling. That year 100 students were involved. In 1996, with the Red Deer Catholic School division, our enrollment soared to ver 300 students. We have grown from a pilot program offering grades 7, 8 and 9 to our present 5 – 12 with over 400 students. St. Gabriel endeavors to offer an academically challenging program to all students by placing them at levels appropriate to their own skills and knowledge.

The curriculum we use is the provincially mandated Program of Studies used by all accredited schools.

St. Paul's Academy (Christ the Redeemer Catholic Separate Regional Division #3)
P.O. Bag 3, Okotoks AB T0L 1T0
Ph: (403) 938-8046
Toll Free: 1-800-659-1945
Fax: (403) 938-8070
E-mail: wbaushe@redeemer.ab.ca
URL: http://www.stpauleducation.ab.ca
General Description: St. Paul's Academy is an electronically connected Christian community dedicated to working collaboratively with parents and students to provide personal choices which foster academic excellence and positive individual growth.

St. Paul Alternate Education Centre
4901 47 Street, St. Paul AB T0A 3A3
Ph: (780) 645-5015
Fax: (780) 645-5789
E-mail: spaec@mcsnet.ab.ca

Rocky View Virtual School (Rocky View School Division #41)
C/o Airdrie Alternate School
213 Main Street, Box 3007, Airdrie AB T4B 2B4
Ph: (403) 948-4360
Fax: (403) 948-3255
E-mail: cooneyd@rvvs.com
URL: http://www.rvvs.com
General Description: The Rocky View Virtual School Program is an educational program that connects students and teachers electronically, over the Internet. We believe that a student's best opportunity for success can often be met through combining this electronic venue with face-to-face meetings, tutorials, laboratories and field trips. We involve Parents as "Key" players in their child's education, and we integrate technology into the traditional educational paradigm. Through this model, we can offer a student an individualized program intended to meet his or her particular educational goals, while integrating an advanced level of technological aptitude in each of our students. We intend to be competitive, and we expect our students to become competitive, both in the educational and the career directions that each of them will follow.

Independent Learning Program (Medicine Hat School District #76)
c/o Medicine Hat High School
200 7th St. SW, Medicine Hat AB T1A 4K1
Ph: (403) 527-3371
Fax: (403) 504-5481
E-mail: csimpson@sd76.ab.ca
URL: http://www.sd76.ab.ca/virtual/index.htm
General Description: We believe that "all can learn". Therefore, our vision for Medicine Hat High School is "Creating enthusiasm for life-long learning". The world that our students are

encountering today and will encounter in the future is rapidly changing. Our challenge is then to prepare students to be successful adults in a highly competitive and integrated global economy in which they must deal with rapid technological innovation, and an ever expanding knowledge base.

Our school, with its caring and innovative environment, inspires our students to pursue their goals and dreams. As a community of learners, we strive for high standards of academic achievement and responsible citizenship while promoting a safe atmosphere of mutual respect and trust. We believe that collaboration is often the best route to success. George Davison School is a caring and nurturing environment, in which students are prepared for a successful future.

Consortium des Ecoles Francophones de l'Alberta
c/o Distance Education Language Services Branch
9th Floor, 11160 Jasper Avenue, Edmonton AB T5K 0L2
Ph: (780) 427-2940
E-mail: def@edc.gov.ab.ca
URL: http://www.learning.gov.ab.ca/french/
General description:

Conseil scolaire régional du Centre-Est #3
CP 249
St. Paul, AB T0A 3A0

Conseil scolaire régional du Centre Nord #4
8527 rue Marie-anne-Gaboury (91 St)
Suite 301
Edmonton, AB T6C 3N1

Conseil scolaire régional du Nord-Ouest
CP 1220
St. Isidore, AB T0H 1M0