Colorado Online Learning
Year 1 Evaluation Report
2002 – 2003

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The Public Good
INCORPORATED

Contents

Appendices

List of Exhibits

I.   Executive Briefing

This report summarizes the findings and recommendations prepared by The Public Good, Inc. in its evaluation of the 2002-03 school year of Colorado Online Learning. The time period represents Year 1 of a three-year grant awarded to COL from the Colorado Department of Education. The evaluation effort included collecting survey data on customer satisfaction from students and site coordinators; conducting two focus groups of COL instructors; conducting interviews with COL staff; and reviewing documents to gauge the extent and quality of implementing COL's plan for delivering high-quality learning opportunities to Colorado's high school students.

COL at a Glance — 2002-03

Course Enrollments	1,224
Instructors on Contract	24
Average Student-Teacher Ratio	12:1
Administrative Staff	4

Finding 1:   **Implementation**

COL is being implemented as planned and described in its August 2002 proposal to CDE. In Year 1, the focus was on providing educational opportunities to high school students. The needs of other target audiences will be addressed in the future; e.g., professional development opportunities for Colorado educators. COL served 55 districts (31% of all Colorado districts). Enrollments reached 1,224 for its first year of operation. COL's student success rate for Fall 2002 was 72%, and rose to 78% for the Spring and Summer 2003 semesters. This success rate compares well to other statewide programs in the U.S., for a relatively young organization. See Exhibits 1-3.

Enrollment Breakdown

	Fall	Spring	Summer
Course Enrollments	457	553	214
Courses Offered	34	32	9
Course Sections	41	45	17
Student-Teacher Ratio	11:1	12:1	13:1

I.   Executive Briefing (continued)

Year 1 Successful Course Completions

COL Course Success

Term	Pass	Fail	Inc
Fall 2002	71%	26%	2%
Spring 2003	78%	22%	0%
Summer 2003	78%	22%	

Legend: ☐ Pass ◼ Fail ☐ Inc
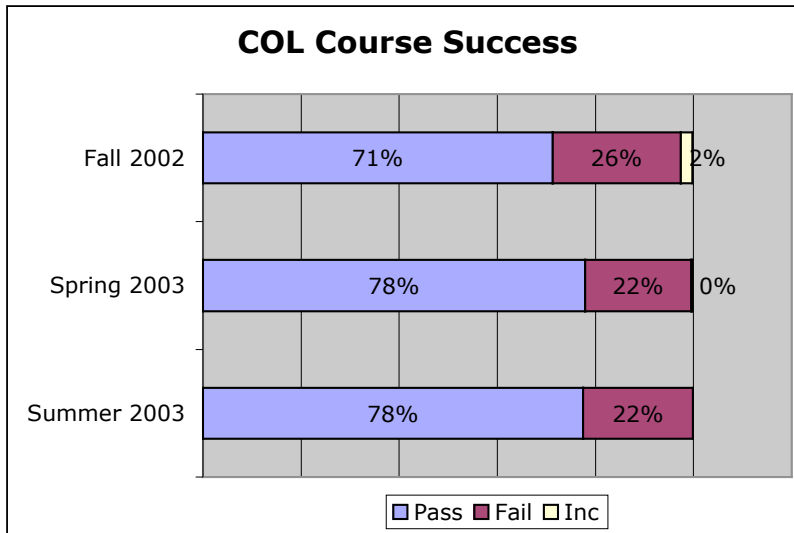
Finding 2:   Meeting Needs
Project leaders use both formal and informal data collection methods to determine the needs of target audiences. In Year 1, this data was used to develop new courses, initiate the COL summer institute, and develop a mentoring program.

Finding 3:   Course Quality
The content of COL courses meets a high academic standard overall, with some variation among courses and by "department." The COL Quality Assurance Program provides a valuable framework for assessing course quality, but these tools and processes need to be revised to ensure greater rigor and consistency, and maintain a continuous cycle of improvement.

> **Recommendations:**
> A. Review the QAP process for opportunities to simplify and consolidate rubrics and review forms without losing key details.
>
> B. Conduct course reviews with more rigor and consistency.
>
> C. Build in a more formal follow-up process when revisions to course content, structure and teaching practices are appropriate.
>
> D. Compile and analyze the data to look for trends, professional development opportunities, strengths and weaknesses.

Finding 4: Instructional Quality
All COL instructors hold Colorado licensure with endorsement in the appropriate subject area. QAP evidence suggests that courses are in alignment with state

I.   Executive Briefing (continued)

standards, but some courses do not make specific reference to standards in the courseware. COL instructors are aware of and employ best practices in online teaching, and instructors are eager for professional development opportunities to sharpen their skills. Teacher focus group participants expressed interest in more:

- Information about online pedagogy;
- Feedback about the quality of their courses and teaching practices; and
- Professional development opportunities.

Recommendations:

E. Make the connections between coursework and state standards more explicit and transparent for students, parents, and other stakeholders visiting the web sites and courseware.

F. Offer COL instructors research updates, resources and ongoing professional development activities on online teaching.

G. Seek out reciprocal agreements with fellow online learning organizations (e.g., Michigan Virtual University) for course reviews and peer-to-peer professional development opportunities.

Finding 5:   Student Support

Just as the needs of COL students vary widely, the available support varies from site to site. Data suggests that COL instructors are very supportive of students, but some students need extra encouragement, help with technical problems and assistance with course content. Some subjects may require more, or different kinds of, support than others. Site coordinators can play an important role in providing student support, but not all students have on-site support.

Recommendations:

H. Look for ways to encourage more schools and districts to appoint site coordinators.

I. Provide site coordinators with professional development opportunities and peer-to-peer communication.

J. Capture data on when and why students drop COL courses as soon as possible after the student becomes inactive.

K. Monitor relationships between student characteristics, perceptions of support, student success and course subject for instructional implications.

L. Look for comparative data on success rates for supplemental online learning programs.

Finding 6:   Administrative Quality

The COL staff is efficient and responsive to the needs of constituents. The executive director and board consider COL's long-term sustainability in their actions and decisions.

I.   Executive Briefing (continued)

Recommendation:
M. Design and implement a sustainability plan, with accompanying strategies and measurable outcomes.

Finding 7:   Serving Priority Populations
District-level data suggests COL is serving the high-poverty, high-need populations as stipulated in the grant. Student-level data is not available, but district data shows that a substantial percent of districts participating in COL are in the priority population. Of the districts participating in COL in Fall 2002:

- More than half (53%) are high-poverty districts.
- Nearly half (45%) are high-academic need districts.
- Twenty-four percent are both high-poverty, high-need.

Recommendation:
N. Work with CDE officials to identify appropriate goals for levels or percentages of priority students being served.

Finding 8:   Providing Equality of Educational Opportunity
COL is providing educational opportunities to a broad range of student populations, across a wide variety of educational needs. COL administrators engage in outreach activities, ranging from presentations to school boards to site visits with potential district participants. COL's technical director works directly with site coordinators and teachers to overcome technical barriers as they arise, and a new platform for course delivery is being installed for Year 2. Evidence suggests, though, that a number of technical problems arise from inadequate technology capacity at the school or district. This is an issue that needs addressing, but is beyond the scope of COL's mission.

Finding 9:
Three unexpected findings emerged during the 2002-03 school year:

- Special education students did well in COL courses;
- Adjustments required of instructors to teach at-risk kids;
- Students participating in an online/face-to-face hybrid summer school incurred no disciplinary actions; and
- Summer school enrollment was robust, presenting some instructor staffing challenges.

II. Background

A. Methodology

The evaluation plan for Colorado Online Learning centers on answering the following three guiding questions:

1. How is the program being implemented?
2. What is the quality?
3. What are the outcomes?

Each guiding question leads to a subset of questions, each with assigned methods of data collection. Data collection methods for this study include reviewing existing documents, interviewing key staff, administering surveys, conducting focus groups, reviewing Quality Assurance Program (course review) data and gathering anecdotal evidence.

A more complete description of methods can be found in the Technical Appendix, which includes survey instruments and all survey data results.

B. Objectives for a Statewide e-Learning Organization

The purpose of the Colorado Department of Education's Online Learning Grant Program is to create a statewide organization that supports and promotes online learning opportunities in K-12 education. Drawing on the recommendations of a 40-member E-Learning Task Force, CDE seeks a focus on high-poverty/high-need schools, while facilitating the development of an organization that serves learning and achievement opportunities for all Colorado students and educators.

CDE intends the statewide e-learning organization, Colorado Online Learning, to be guided by these principles:

1. Complement and supplement existing programs;
2. Collaborate with other in-state online learning programs and cyberschools in developing and offering curricula;
3. Meet a broad range of educational needs, including advanced as well as remedial work in core subjects or skills, test preparation, applied technology and career exploration;
4. Support a broad range of learning styles and abilities.

II.   Background (continued)

C.   COL Goals, Objectives and Strategies

Colorado Online Learning's (COL) overarching goal is to use educational technology to improve educational outcomes, and increase equality of educational opportunity across a wide variety of educational needs and a broad range of student populations. COL proposed a number of objectives and strategies for accomplishing this goal, including:

- Conducting ongoing needs assessments to identify educational gaps COL should seek to fill. This includes seeking information about, and, where possible, responding to poverty-related needs and educational needs of the state's students and educators.

- Establishing priorities for populations to be served. These are:
  - Students from high-poverty districts which have high-need schools
  - Students who need or desire courses
  - Students who need alternative education (e.g., at-risk students or adolescent adult learners)
  - Educators in need of professional development courses

- Aligning course content with applicable state and national standards

- Providing professional development for educators.

COL proposed to measure success in these ways:

1.   Number of successful course completions by students by students in poverty and from high-poverty districts with high-need schools;

2.   Number of successful course completions by students in poverty, regardless of whether they come from a high poverty/high need school district;

3.   Total number of successful course completions, and in the future, increased academic achievement by students taking online courses;

4.   Number of low ranking schools improving academic performance through online learning;

5.   Number of schools transforming teaching and learning practices through use of online technology;

6.   Number of professional development course or workshop completions by teachers in the online program, or other educators taking online courses through COL.

III. Implementation

A. Description of Implementation
1. Providing Educational Opportunities

Question: How is the project being implemented?

Finding 1: COL is being implemented as planned and described in its August 2002 proposal to CDE. In Year 1, the focus was on providing educational opportunities to high school students. In subsequent years, the needs of other target audiences will be addressed; particularly, professional development opportunities for Colorado educators. COL served 55 districts (31% of all Colorado districts). Enrollment reached 1,224 for Year 1 of the grant period. COL's student success rate for Fall 2002 was 72%, and rose to 78% for the Spring and Summer 2003 semesters. This success rate compares well to other statewide programs in the U.S., for a relatively young organization.

Evidence: The evaluator reviewed documents, including the COL web site (http://www.col.k12.co.us) and registration records, and interviewed COL staff members to learn about project implementation. Exhibit 1 provides a quick look at key figures from COL's first year of operations.

Exhibit 1:   COL At a Glance — 2002-03

Course Enrollments	1,224
Instructors on Contract	24
Average Student-Teacher Ratio	12:1
Administrative Staff	4

Courses are provided on a fee-per-course-enrollment basis to school districts choosing to participate. As students from high-poverty, high-need districts are a target audience, districts that exceeded the state average for students qualifying for the federal Free and Reduced Lunch program received half-price tuition on COL course fees.

COL's high enrollment in this time period suggests it is meeting a need among Colorado's high school student population. Exhibit 2 on page 8 shows the growth trend in enrollment figures (in rounded numbers) for COSC and COL, the state's principal supplemental online learning providers.

Exhibit 2:   **Supplemental Online Learning Enrollment**

	COSC		COL
1999-2000	2000/01	2001/02	2002/03
60	200	450	1200

Exhibit 3 (below) offers a breakdown of the total enrollment figure of 1,224 for Year 1. COL enrolled 457 students for the Fall 2002 semester. Spring 2003 enrollment rose to 553, and additional sections were added to some courses to keep course enrollment below 20 students per section. For its first summer institute, COL enrolled 214 students from 15 districts in 9 courses.
[Note: Average Student-Teacher Ratio = Course Sections ÷ Course Enrollments]

Exhibit 3:   Enrollment Breakdown

	Fall	Spring	Summer
Course Enrollments	457	553	214
Courses Offered	34	32	9
Course Sections	41	45	17
Student-Teacher Ratio	11:1	12:1	13:1

COL projected 450 course completions for Spring 2003 in its proposal to CDE. No projections were made for Fall 2002. The actual number of successful course completions in Year 1 is 926 (329 in Fall, 431 in Spring and 166 in Summer). Exhibit 4 shows the percentages of successful completers.

Exhibit 4:

COL Course Success

	Pass	Fail	Inc
Fall 2002	71%	26%	2%
Spring 2003	78%	22%	0%
Summer 2003	78%	22%	
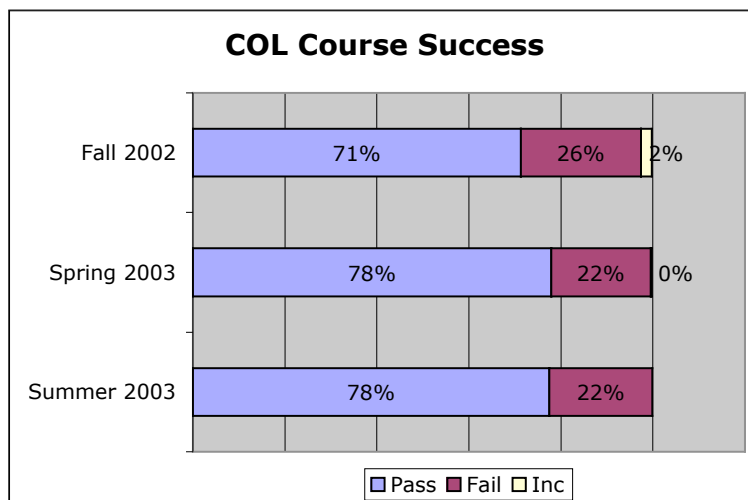
III. Implementation (continued)

2. Governance

In transitioning from COSC to COL, a temporary board was established to serve from November 8, 2002 through May 23, 2003. A permanent board was seated in May 2003, serving two and three-year terms. The board members are:
- Steve Jones, COL Board Chairman, superintendent, South Routt County
- Mike Poore, COL Board Vice Chairman, superintendent, Sheridan School District
- Dr. Terry Bishop, deputy superintendent, Colorado Springs D-11
- Glenn Davis, superintendent, Huerfano School District
- Randy Johnson, principal, McLain Community HS, Jefferson County
- Gena Ramey, principal, Otis School District
- Jeanne Ross, distance learning director, Denver Public Schools

Key roles are as follows:

Lead Agency:	Denver Public Schools
Fiscal Agent:	San Luis Valley Board of Cooperative Services
Server Support:	Jefferson County Public Schools[1]

The board bylaws call for quarterly meetings. In Year 1, the board approved staff proposals to offer summer school courses on a fiscally self-sustaining basis, to explore dual credit opportunities with post-secondary institutions for selected COL courses, and to conduct an RPF for online learning platform providers. In addition, the board approved personnel contracts, reviewed the Executive Director's performance, and began investigating alternative governance options that would allow COL to serve as its own fiscal agent.

3. Administration

COL employs four staff members to conduct the business of providing online courses to students. The staff positions are:

Executive Director:	Dr. Tim Snyder
Instructional Development Director:	Ed Adams
Student Services Director	Maryann Pena
Technical Director:	Bridget Bricker

As a virtual organization, COL staff and instructors are located throughout the state, reflecting the Colorado's diverse regions. The executive director and student services director have offices at the COL headquarters in Monte Vista.

The instructional development director is on the Western Slope (in Ouray) and the technical director is on the Front Range (in Lakewood). The staff members

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[1] The server was moved to the Monte Vista offices in August 2003.

III.   Implementation (continued)

communicate through email, phone calls and occasional face-to-face meetings. Each staff member prepares a weekly activity report shared via email.

In addition to full-time staff, COL works with 64 individuals at the school or district level to serve as Site Coordinators. About half the participating districts have official site coordinators. The roles of site coordinators vary from very involved (daily, direct contact with COL students) to minimally involved (administrative, technical assistance, little direct contact),

4.   Technology Infrastructure

COL courseware resides on a server in Jefferson County Public Schools, using the Jones Knowledge platform for course delivery. Instructors and students access course materials from their school and home locations. They communicate with each other using the tools provided by Jones Knowledge platform, as well as individual email accounts, fax, mail and telephone communication.

Each participating district is responsible for providing students with access to the Internet and the technology tools (e.g., email, fax) for completing coursework. Consequently, technology quality, Internet speed and Internet access vary. Both student and instructor are affected by the quality of the student's Internet connection and technology tools.

Initially, Jones Knowledge provided the platform through which COL courses were available online. This service worked for the beginning level of course enrollments, but it had limitations. For example, the grade book posed problems for instructors and site coordinators. In addition, instructors had limited ability to control chat areas, such that unruly students could disrupt productive discussion. For these reasons, as well as changes in the Jones Knowledge support for K-12 clients, the board authorized a process for selecting a new course management/student information system platform.

COL switched to eCollege in the summer. All teachers received training in using the eCollege platform during June. Staff updated their courses to reflect the eCollege structure and interface, and the transition was complete, save some technical difficulties, with the start of the Fall 2003 semester.

5.   Curriculum and Instruction

COL develops its own courseware, using a design team for each course comprised of the instructor, COL personnel and project consultants. Courses are designed to meet Colorado Model Content standards, as well as content, structure and pedagogy standards outlined in the COL Quality Assurance Program.

III. Implementation (continued)

Enrollment in any given course section is limited to 20 students, with 12 to 20 students the norm. Courses are accessible to instructors and students at any time of day, from any location with Internet access. Course materials that are not available online, such as audio tapes for foreign language courses, are provided to students at no additional charge.

All COL instructors must have a Colorado secondary license with the appropriate endorsement for their subject area. Beyond classroom teaching skills, instructors are expected to be skilled in Web page design, email management and Internet tool use. In addition, they must successfully complete an online professional development course on online teaching. Staff members and instructors provide their own equipment and Internet connection, which varies by individual.

Student support comes in the form of communication with the instructor and fellow students, the site coordinator, and, for some at-risk students, mentors. COL's mentor program provides stipends for trusted adults or older students who can provide assistance and encouragement to high-risk students. In the Spring 2003 semester, 27 high-risk students received mentoring.

During the Summer, 175 students from Denver Public Schools took six courses through COL at designated DPS sites. In this hybrid of online and face-to-face teaching, on-site facilitators assisted the primarily at-risk student population with math coursework.

6.   Outreach

Outreach efforts are a strong point for Colorado Online Learning. These activities address two important goals for COL: to increase equality of educational opportunity by encouraging wide participation in COL, and to ensure the organization's sustainability by forging partnerships that will sustain it beyond the grant funding period.

Executive Director Tim Snyder communicates regularly with superintendents about COL opportunities via email, mail, conference presentations and meetings (see Appendix B for a sample correspondence). Dr. Snyder and other staff members travel the state to present at conferences and meet with school district leaders. Between February and April 2003, COL staff members visited 21 schools and school districts. At these public forums, the staff provide information and answer questions about COL, dispel myths about online learning, and encourage districts and schools to take advantage of COL's online course offerings. Target audiences include superintendents, principals, school counselors and school board members.

III.   Implementation (continued)

COL faces some hurdles, even antagonism, in positioning itself as an ally to districts. This is due to misunderstanding about COL's funding model, and confusion about the distinctions between cyberschooling and supplemental online learning. In particular, some see COL as competing for Per Pupil Revenues; i.e., a threat to dwindling funds, rather than an ally to provide students with access to quality educational opportunities. In fact, COL does not pull PPR from districts; instead, enrollments are funded on a fee-per-course basis. COL staff members are pro-active in addressing the confusion about various online virtual learning organizations.

Exhibit 5: Districts with the Highest COL Enrollments[2]

District	Enrollments	District Size[3]
Jefferson County R-1	79	87,925
Huerfano RE-1	51	830
Salida R-32	33	1,120
Thompson R-2J	23	14,974
Falcon 49	22	7,854
Sargent RE-33J	19	403
South Routt RE-3	19	452
Rangely RE-4	15	564
Monte Vista C-8	12	1,382
Buena Vista R-31	11	993

Currently, fifty-five (55) districts enroll students in COL courses, or 30% of all Colorado districts. This is a substantial leap in participation from that of COSC in the prior year. An estimated 65% of the student enrollment comes from rural schools. Most districts enroll fewer than 10 students in COL each semester. Exhibit 5 (above) shows COL's most active districts. The full list of participating districts is shown in Appendix A.

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[2] Based on Fall 2002 enrollment records.

[3] District size is based on Fall 2002 Pupil Membership listed in the Summary of School District Data for School Year 2002-2003, April 2003, Data Research Unite, Colorado Department of Education.

III.　Implementation (continued)

COL serves a variety of districts from across the state, ranging from the largest district to some of the state's smallest. Participating districts include rural, urban and suburban, with rural districts predominating.

In addition to encouraging district participation in COL, Dr. Snyder seeks partnerships and alliances with organizations that support COL's mission and long-term sustainability. For example, COL is developing a partnership with: Colorado MathStar to pilot math courses for Colorado middle school students; Denver Center for the Performing Arts to deliver film biographies online; Denver Public Library to deliver digitized photographs online. The net result is more resources for Colorado students and educators.

B.　Meeting Constituency Needs

Questions:
- What efforts are being made to ascertain the needs of clients, potential clients and other stakeholders?
- How is needs assessment data being used to strengthen COL programs?

Finding 2:
Project leaders used both formal and informal data collection methods to determine the needs of target audiences. The data was used to develop new courses, initiate the COL summer institute, and develop a mentoring program.

Evidence:
COL's curriculum offering consists of 34 courses in mathematics, language arts, social studies, science, technology and foreign language, including two advanced placement courses. The curriculum responds to two broad gaps in educational opportunities for Colorado high-school students:

1. Availability of supplemental courses, such as foreign languages, for students in schools that are unable to provide those courses, usually due to low enrollment and/or lack of resources;

2. Core courses for students who are making up credit for failed classes or who have scheduling conflicts at their own school.

Course offerings reflect the varying needs of students from districts across the state, based on a needs-assessment survey of Colorado superintendents conducted in September 2001. Additional courses will be added in the future.In September 2002, Colorado Online School Consortium sent a survey to 400 Colorado high school principals. The report, prepared by Dr. Mary Taylor in December 2002, offered insight on Colorado high school students' online learning, based on the

responses of 197 principals. While the principals expressed concerns about the costs, technical demands and quality of online courses, 81 percent said they could foresee an expanded role for online courses in their school in the near future. Principals identified needs for online courses in all curricular areas. Math, core curriculum and world languages were of interest to nearly half of all respondents.

The needs assessment data played a role in shaping the following Year 1 actions:

- Developing and offering COL summer institute courses;
- Adding Psychology and French courses, along with other courses designed for both low- and high-performing students;
- Validating and pursuing the mentor concept; and
- Providing COL web-site curriculum resource links.

In addition to the formal needs assessment survey, Dr. Snyder plays an active role in statewide education organizations and task forces on e-learning, which provides him with many opportunities to learn about the concerns and needs of education leaders across the state. Further, Dr. Snyder maintains active email communications with state superintendents and principals, keeping them apprised of COL opportunities and inviting their suggestions and ideas.

Recommendation: None.

IV. Qualitative Review

Meeting Student Needs
"Last semester I had an F in my class. This form of learning has put me back on track and [I earned] a good grade at that."
Introduction to Composition Student

"In my regular school, teachers would always give me A's on my essays, so I did not know what my strengths and weaknesses were. …Your comments on my essays have shown me what I need to work on to become a better writer."
AP English Student

A. Course Quality

Question: **What is the overall quality of course content?**

Finding 3:
The content of COL courses meets a high academic standard overall, with some variation among courses and by "department." The COL Quality Assurance Program provides a valuable framework for assessing course quality, but these tools and processes need to be revised to ensure greater rigor and consistency.

Evidence:
COL's Quality Assurance Program (QAP), adopted by the COSC board of directors in April 2002, is designed to:

- Assure high quality standards-based courses via initial course approval and continuous curricular and pedagogical improvement.

- Provide a structure for improving student learning in the online environment.

- Provide a means of identifying key professional development areas for teachers.

- Support and empower teachers with high quality data concerning course quality, student learning, and feedback.

The QAP[4] includes instruments for reviewing course content and structure, course pedagogy, student reviews and instructor self-assessment. These activities are undertaken by a Quality Assurance Team, consisting of the instructor, a content specialist, and a specialist in online pedagogy, under the direction of the COL executive director or the director of instructional quality.

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[4] For a complete description of the QAP and instruments, go to http://www.col.k12.co.us/aboutcol/index.htm

In the fall of 2002, most COL courses underwent course review by a Quality Assurance Team. This course data is summarized below.

Using a four-point scale, in which 4 = Exemplary, reviewers rated each of the COL courses. In the aggregate, courses rated an average of 3.22, in the Accomplished range, as shown in Exhibit 6.
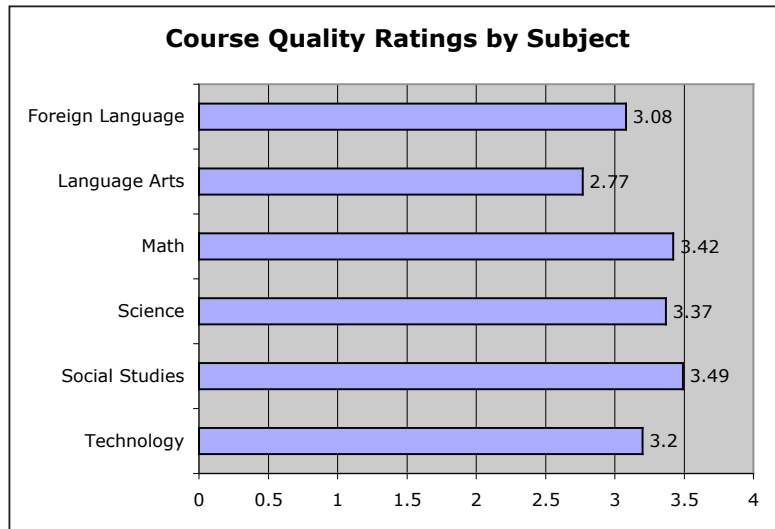
Exhibit 6:

COL Course Quality = 3.22			
1	2	3	4
Beginning	Developing	Accomplished	Exemplary

In terms of course content and structure, the median rating was 3.00. The low score for a course was 2.19 (a foreign language course), while the highest score was 4.0 (a social studies course).

Exhibit 7 shows the course quality ratings data by department. Social studies courses received the highest ratings, while language arts courses received the lowest. Examination of the individual course reviews reveals some variation in scoring practices, so slight variations between departments may not be significant.

Exhibit 7:

Course Quality Ratings by Subject

Subject	Rating
Foreign Language	3.08
Language Arts	2.77
Math	3.42
Science	3.37
Social Studies	3.49
Technology	3.2

Scale: 1= Beginning   2= Developing   3= Accomplished   4= Exemplary

Discussion of Finding:

In fall of 2002, outside and internal course consultants used standardized rubrics to review 26 COL courses. They reviewed 25 courses using the QAP rubric for Course Content and Structure. Fifteen of those same courses were also reviewed using the QAP rubric for Course Pedagogy. The course review process, while

IV.   Qualitative Review

A.   Course Quality (continued)

subject to some variation in the ways reviewers interpret the scoring rubrics, offers a valuable perspective on the quality of COL course content and pedagogy.

The Quality Assurance Program includes a standardized Course Content and Structure Review, but some reviewers used different forms and rubrics. The review documents were not labeled consistently or in any discernible order. The director of instructional development sent instructors their course reviews and invited them to revise their courses as necessary, using the review feedback to inform their efforts.

Recommendations:
- Review the QAP process for opportunities to simplify and consolidate rubrics and review forms without losing key details.

- Conduct course reviews with more rigor and consistency,

- Build in a more formal follow-up process when revisions to course content, structure and teaching practices are appropriate.

- Compile and analyze the data to look for trends, professional development opportunities, strengths and weaknesses.

B.   Instructional Quality

Questions:
- What are the instructors' qualifications for the courses taught?
- Is course content aligned with state standards?
- Are online teaching practices in line with professional best practices?

> *A Strong Learning Experience*
>
> *"I have honestly learned much more in this Spanish course than I did in both my regular classroom Spanish I and II courses. With the way everything in this course was presented, I believe I retained vast amounts of information."*
>
> *COL Student*

Finding 4:
COL instructors hold Colorado licensure with endorsement in the appropriate subject area. Most courses are in alignment with Colorado state standards, but this fact is not evident for all of the courses. Most COL instructors employ online

IV. Qualitative Review

B. Instructional Quality (continued)

teaching practices that are in line with best practices, but instructors are eager for professional development opportunities to sharpen their skills. Participants in the teacher focus groups expressed interest in more:
- Information about online pedagogy;
- Feedback about the quality of their courses and teaching practices; and
- Professional development opportunities.

Evidence:
Phone interviews and emails with Ed Adams, director of instructional development. Two focus groups with COL instructors conducted June 19 and 23, 2003 with 8 participants in each group.

Qualifications. COL instructors must hold Colorado licensure with endorsement in the appropriate subject area.

Standards. Of the courses reviewed in Fall 2002, the aggregate QAP rating for State Standards Alignment was 2.97 on a four-point scale, i.e., the high range of Developing, as seen in Exhibit 8. Some of the reviewers assigned low scores for alignment with standards if the courseware did not make overt reference to state standards, whether or not the coursework actually aligned with standards.

Exhibit 8:

Standards Alignment = 2.97			
1	2	3	4
Beginning	Developing	Accomplished	Exemplary

Online Teaching Practices. Exhibit 9 (on page 19) shows that courses rated for Course Pedagogy yielded an aggregate score of 3.29, or Accomplished, suggesting instructors hold a firm grasp of online teaching practices. However, the QAP team encountered difficulties finding reviewers who were knowledgeable about online teaching practices. As a result, some COL instructors reviewed each other's courses, and only 15 courses were reviewed for pedagogy, compared to 26 reviewed for content and structure.

IV. Qualitative Review

B. Instructional Quality (continued)

Exhibit 9:

COL Course Pedagogy = 3.29			
1	2	3	4
Beginning	Developing	Accomplished	Exemplary

Recommendations:

- Make the connections between coursework and state standards more explicit and transparent for students, parents, and other stakeholders.

- Offer COL instructors current research, resources and ongoing professional development activities on online teaching.

- Seek out reciprocal agreements with fellow online learning organizations (e.g., Michigan Virtual University) for course reviews and peer-to-peer professional development opportunities.

IV. Qualitative Review (continued)

C. Quality of Student Support

> ### *Teacher Appreciation*
>
> *"I never thought an online course could be so interactive. I took an online course last year and my teacher wasn't nearly as supportive as you have been. Thank you for being such a great teacher."*
> *-- COL student*
>
> *"Learning physics through an online course was definitely challenging, but I always felt that I could ask questions and get detailed answers from you on anything."*
> *-- COL student*

Questions:
- What kind of support is available to all COL students?
- What kind of support is available to at-risk students or those needing extra assistance?

Finding 5:
Just as the needs of COL students vary widely, the available support varies from site to site. Data suggests that COL instructors are very supportive of students, but some students need extra encouragement, help with technical problems and help with course content. Some subjects may require more, or different kinds of, support than others. Site coordinators can play an important role in providing student support, but not all students have ready access to someone on site.

Evidence:
COL teachers who participated in focus groups in June 2003 suggested that site coordinators play a critical role in student success. More specifically, those students who have ongoing and frequent contact with a site coordinator are more likely to succeed. Almost half (46%) of the site coordinators surveyed say they have daily contact with COL students. Not surprisingly, most site coordinators who have daily contact with students are in districts with fewer than 300 students.

One site coordinator survey respondent wrote, "There are growing pains, but I feel far more confident in handling classes next year," which suggests that site coordinators have a learning curve to overcome in fulfilling their responsibilities. Another suggested, "I highly recommend that some type of site-facilitator training might be held in the beginning of the school year, ...if not for "official" training, just for a share-session on what has worked and what hasn't." COL instructors who participated in the June 2003 focus group sessions also strongly urged training opportunities for site coordinators.

IV. Qualitative Review

C. Quality of Student Support (continued)

Students in the Spring and Summer 2003 sessions were surveyed about their experiences with taking a COL course. Students were asked to state how strongly they agreed or disagreed with several statements, including two that relate strongly to student support. Exhibit 10 shows the percent of students who Agreed or Strongly Agreed with these two statements: *"I had the support and materials that I needed to be successful,"* and *"People at my school helped me if and when I needed it."*[5]

Exhibit 10: COL Students on Student Support
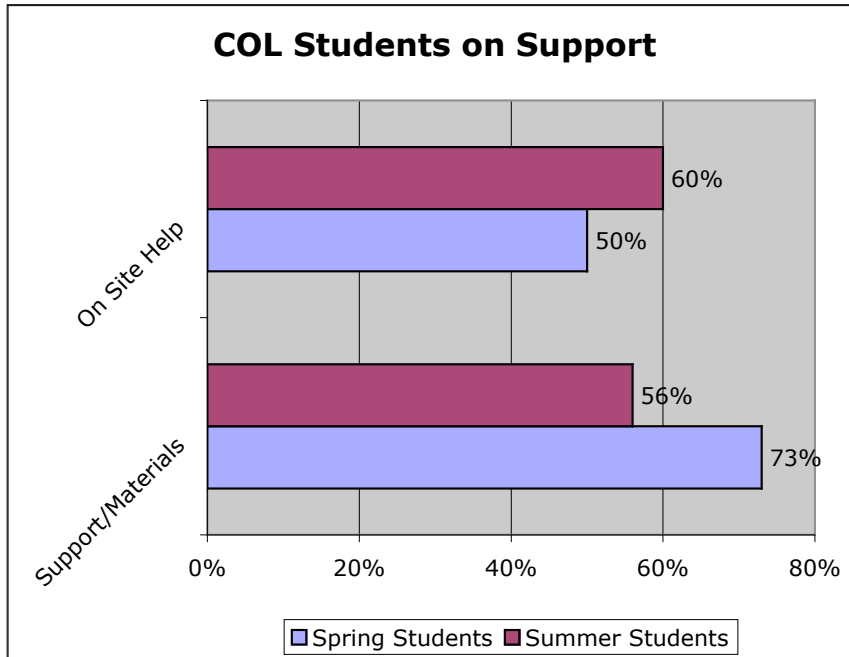
The Summer students surveyed were all from Denver Public Schools; nearly 60% of those students were taking math courses at district locations with an onsite math facilitator available to assist students. This may account for the 10% higher percentage of Summer students reporting that they had people at school helping them when needed. It is interesting to note the disparity between Spring and Summer students who say, "I had the support and materials I needed to be

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[5] The wording of the statement for summer school students was altered slightly to reflect the fact that facilitators were available on site: "The facilitator at the school helped me if and when I needed it."

IV.   Qualitative Review

C.   Quality of Student Support (continued)

successful." One can infer that the perceptions of student support vary under different circumstances. But why is that the case? The course completion rates for the Spring and Summer student groups were not significantly different. However, differences in student characteristics and differences in course subject matter may account for some of the variation in students' perceptions. Students taking Summer school courses may be recovering credits due to a prior failure. Students in math courses (both in Spring and Summer 2003) were more likely to say they needed more feedback and were less likely to think the teacher knew and responded to their needs and abilities. See Exhibit 11 below.

Exhibit 11:

	% Who Agree	
Student Survey Statements About Support	**Spring**	**DPS Summer**
Q3. I had the support and materials I needed to be successful.	72.7%	55.5%
Q4. People at my school helped me if and when I needed it.[4]	50.2%	60.0%
Q6. The teacher knew and responded to my needs and abilities.	76.2%	45.9%
Q8. Assignments were graded and returned promptly.	67.2%	30.3%
Q9. Feedback on my assignments showed me how to do better.	60.7%	31.8%
Q11. I always felt the teacher cared about me as a person.	72.1%	53.3%

Spring 2003: n=287
DPS Summer: n=135; Summer 2003 Denver Public Schools students; most taking math
    courses online at designated DPS locations with onsite facilitators

COL launched a mentor program in Spring 2003 for 27 high-risk students, resulting in a 79 percent success rate for those students. The mentor program pairs a high-risk student with an adult or responsible peer who can provide encouragement and support to the online student. Mentors receive a $100 stipend, and, if the student is successful in completing the course, an additional $50. In Spring 2003, 27 students from Aurora, Idalia, Norwood, Ouray, South Conejos, South Routt and Wiggins school districts participated in the new mentor program.

IV. Qualitative Review

C. Quality of Student Support (continued)

Issue: Students who drop or do not complete courses present a concern. More information is needed regarding the reasons for dropping out, as well as the norms for calculating the success rate for online programs. Two online learning programs that began operations in the late 1990's, Concord Consortium's Virtual High School and Florida Virtual High School, report success rates of better than 90 percent, compared to COL's 78 percent. In their first years of operation, however, their success rates were significantly lower. Are these comparisons accurate? If so, why is there so large a discrepancy? Is it reasonable to expect COL to reach comparable success rates? Is there a learning curve associated with providing student support? Do other factors, such as technology problems, play a role? Future evaluation efforts should seek to answer these questions.

Recommendations:
- Provide site coordinators with professional development opportunities and peer-to-peer communication.
- Capture data on when and why students drop COL courses as soon as possible after the student becomes inactive.
- Monitor relationships between student characteristics, perceptions of support, student success and course subject for instructional implications.
- Look for comparative data on success rates for supplemental online learning programs.

IV. Qualitative Review (continued)

D. Quality of Administrative Services

> ***Administrator Appreciation***
>
> *"You led us admirably to the successes, respect and high profile all of us at COL have been enjoying. Many, many thanks."*
> *-- COL instructor email to executive director*
>
> *"Thank you again for your time and effort. We need all the help and support we can get. Please know that because of your efforts, [my son] is able to 'go' to school rather than becoming a possible high-school drop out. It means a lot to me, as his mother."*
> *-- Parent note to student services director*
>
> *"Thank you for the excellence in providing for our students. They have greatly benefited from this experience, and so have I."*
> *-- COL site coordinator*

Question:
- Are administrative staff efficient and responsive to stakeholder needs?

Finding 6:
The COL staff is efficient and responsive to the needs of constituents. The executive director and board consider COL's long-term sustainability in their actions and decisions.

Evidence:
Participants in the teacher focus groups gave the following responses when asked to describe COL Administrative Support:

- Getting better all the time
- Job security (from 45 students to thousands)
- Efficient, organized
- Energetic
- Advocates for teachers and philosophy of online learning
- Very helpful
- Visionary
- Moving from chaotic (very beginning) toward efficient, professional

- Innovative
- Timely
- Politically savvy
- Enthusiastic
- Risk takers
- Can-do attitude
- Personal connection
- Tremendous work load
- Need outside support (i.e., distributing materials)

IV.   Qualitative Review

D.   Quality of Administrative Services (continued)

It is clear from the focus group data and from observing staff and board meetings that the administrative staff enjoy a high degree of confidence and respect from within the organization. In addition, site coordinators, who play an important role as the liaison between districts and COL, give the COL administrative staff very high marks for quality (see Exhibit 12). [Note that the relatively low marks for Course Delivery pertain to the Jones Knowledge platform, which was replaced in time for the Fall 2003 semester.]

Exhibit 12:

Site Coordinators Rate COL Quality

	Rating
COL Administrative Staff	
Instructor Teaching Ability	
Instructor Knowledge	
Technical Support	
Course Delivery	
Course Content	

4.2   4.4   4.6   4.8   5   5.2   5.4   5.6   5.8

6-point Scale: 1=Poor   6=Excellent
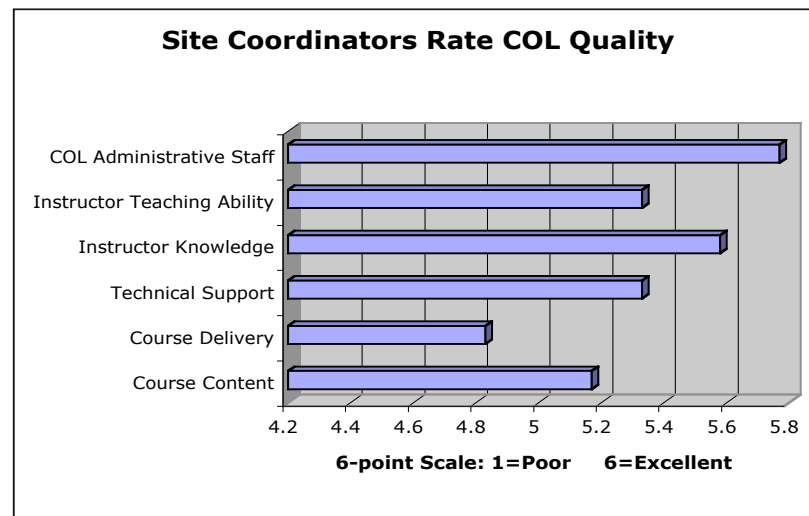
Recommendation:
- Treat sustainability as a more formal organizational goal, with accompanying strategies and measurements for success.

V.   Outcomes

A.   Serving Priority Populations

Question: Are priority students being served?

Finding 7:
District-level data suggests COL is in fact serving the high-poverty, high-need populations as stipulated in the grant. Student-level data is not available. Guidelines for E2T2 funds do not define criteria for success in this area.

Evidence:
Of the districts participating in COL in Fall 2002:
- More than half (53%) are high-poverty districts.
- Nearly half (45%) are high-academic need districts.
- Twenty-four percent are both high-poverty, high-need.

Of the 55 districts participating in COL in the Fall 2002 semester, 53% meet the "High Poverty" criteria; that is, they exceed the state average of Free/Reduced Lunch students. Forty-five percent (45%) are districts with "High Academic Need"; that is, they received a Low or Unsatisfactory rating on the School Accountability Report.

Exhibit 13 compares COL district statistical data with statewide data on high-poverty and high-academic-need districts.

Exhibit 13: High-Poverty, High-Academic-Need Districts in COL

	Number in COL	Total in State	% in COL
Districts	55	178	31%
High-Poverty Districts[Δ]	29	118	24.5%
High-Need" Districts[+]	25	100	25%
High-Need, High-Poverty Districts	13	NA	—

Recommendation:
- Work with CDE officials to identify appropriate goals for levels or percentages of priority students being served.

[Δ] High-poverty districts are those that exceed the state average (29.01%) of Free/Reduced Lunch students. See
http://www.cde.state.co.us/cdenutritran/download/pdf/20022003FRREDUCED03rev1.pdf
[+] See http://www.cde.state.co.us/edtech/download/e2t2-highneed.pdf

V.   Outcomes

B.   Ensuring Equal Educational Opportunity

Questions:
- How are technical barriers being overcome?
- How is COL reaching out to new audiences or underserved?

Finding 8:
COL is providing educational opportunities to a broad range of student populations, across a wide variety of educational needs. COL administrators engage in outreach activities, ranging from presentations to school boards to site visits with potential district participants. COL's technical director works directly with site coordinators and teachers to overcome technical barriers as they arise, and a new platform for course delivery is being installed for Year 2. Evidence suggests, though, that a number of technical problems arise from inadequate technology capacity at the school or district. This is an issue that needs addressing, but is beyond the scope of COL's mission.

Evidence:
Colorado students are enrolling in a range of courses, from Math Fundamentals to foreign languages to AP courses. In its first semester of operation, COL served:

- One-third of all school districts, including rural and urban districts.
- One-fourth of Colorado's high-poverty districts.
- One-fourth of the state's high-academic-need districts.

Forty-five percent (45%) of site coordinators say dealing with technical problems is their biggest challenge. They also gave relatively low marks to COL on course delivery (e.g., online tools) compared to other quality ratings — 4.8 on a 6-point scale (see Exhibit 12 on p. 25). Most course delivery issues related to the platform should be resolved as the eCollege platform becomes fully operational. Technical Director Bridget Bricker is responsive to the needs of staff, instructors, and site coordinators, but, in the words of one site coordinator, "Most technical problems were due to our school's technical issues." COL's success in serving all Colorado students is dependent in part on external efforts to improve technology capacity in those districts that have poor Internet service and inadequate equipment.

Outreach to new audiences is a strong point of the COL organization. See the section on Quality of Administrative Services (p. 24) for more information. As for underserved audiences, COL is investigating the demand for and feasibility of tailoring COL course offerings to teen mothers.

V. Outcomes (continued)

C. Measuring Student Progress

Question:
- Are students showing an increase in academic achievement?

Discussion:
Collecting data on student progress is problematic for a supplemental online learning organization. Student records are not fully disclosed to COL. Also, it is difficult to link one or two online courses to changes in academic achievement. After discussions with CDE officials, the evaluator will revise the evaluation plan to focus instead on *measuring student success within COL courses*.

D. Measuring Progress in Low-Ranking Schools

Question:
- Are low-ranking schools increasing academic achievement through online learning?

Discussion:
As mentioned in item C above, it is difficult for a supplemental education provider to link its services with school-wide progress in academic achievement. In particular, a given school may enroll only a handful of students for one or two courses each.

E. Unexpected or Unintended Results

Question:
- What unexpected or unintended results can be identified?

Finding 9:
Three unexpected findings emerged during the 2002-03 school year:

- Special education students did well in COL courses;

- Adjustments required of instructors to teach at-risk kids;

- Students participating in an online/face-to-face hybrid summer school incurred no disciplinary actions; and

- Summer school enrollment was robust, presenting some instructor staffing challenges.

V. Outcomes

E. Unexpected or Unintended Results (continued)

Discussion:

Success of Special Education Students. COL instructors provided anecdotal evidence that special education students with IEPs have been doing well in their course work. Teachers attribute this in part to students being free of low expectations from classmates and teachers, and that students seem to participate in online discussions and ask questions with greater ease than in traditional classroom settings.

Teaching At-Risk Kids. COL instructors participating in focus groups said that, with the increase in enrollment, they were seeing more students at-risk for dropping out or failure. They were surprised by adjustments they needed to make in order to accommodate the needs of these students\

Lack of Discipline Incidents. Denver Public Schools officials reported a total absence of discipline incidents during its online summer school program, consisting of 213 students taking COL courses in four DPS locations.

Summer School Staffing Challenges. With no prior experience from COSC to draw on, COL administrators were not sure what to expect when it offered 9 courses in a summer institute. Enrollment exceeded 200, presenting a challenge to get teachers to work during the summer.

F. Factors Influencing Program Outcomes

Question:
- What internal and external factors may have influenced program results?

Discussion:

Internal:
- COL's small but strong staff is responsive to stakeholders, alert to opportunities to improve and expand, and conscientious in carrying out activities to meet goals and objectives.

- The Quality Assurance Program provides a strong foundation for ensuring course and instructional quality.

V.   Outcomes

F.   Factors Influencing Program Outcomes (continued)

- Allowing districts to enroll students when the schools lack the technology capacity students need to successfully complete the course places the student at risk for drop out and places a burden on the instructor and site coordinator.

- Offering a fee discount to high-poverty districts encourages more enrollment and new districts to come on board.

External:
- Some districts, especially in rural, high-poverty areas, lack the technology capacity and access necessary to participate in online learning. This issue is beyond the scope of COL's mission, yet it influences COL's success in providing equality of opportunity.

- Increasing competition for students and PPOR affects COL in both positive and negative ways. COL allows some districts to offer students new educational opportunities, which may improve the district's student retention. Such districts can form a mutually beneficial partnership with COL. On the other hand, some may incorrectly perceive COL as similar to full-time cyberschools, which pose a threat to districts.

Appendix A

Districts Participating in COL

- Adams 50
- Archuleta Cty 50JT
- Arriba-Flagler C-20
- Boulder Valley RE2
- Buena Vista R-31
- Custer C-1
- DeBeque 49JT
- Denver County 1
- Edison 54 JT
- Elizabeth C-1
- Falcon 49
- Fowler R-4J
- Gilcrest RE-1
- Gilpin County RE1
- Gunnison Water
- Shed RE1J
- Huerfano RE-1
- Idalia RJ3
- Jefferson Cty R-1
- Kiowa C-2y
- Kit Carson R-1
- La Veta RE-2
- Liberty J-4
- Limon RE-4J
- Lone Star 101
- Monte Vista C-8
- Mtn Valley RE-1
- Northglenn-Thornton12
- Norwood R-2J
- Ouray R-1
- Park R-1 (Fairplay)

- Park R-3 (Estes)
- Pikes Peak BOCES
- Plateau Valley RE5
- Poudre R-1
- Pueblo 60
- Salida R-32
- Rangely RE-4
- Ridgeway R-2-Ouray
- Roaring Fork RE-1
- Sanford 6J
- Sangre De Cristo
- RE-22J
- Sargent RE-33J
- Sierra Grande R-30
- South Conejos R-10
- South Routt RE-3
- St.VrainVally RE 1J
- Summit Re-1
- Telluride R-1
- Thompson R-2J
- Vilas RE-5
- Walsh RE-1
- Weld RE-8 (Ft. Lupton)
- Wiggins RE-50J
- Woodlin R-104
- Wray RD2

Appendix B

COL Course List

In the Fall 2002 semester, COL offered these 34 courses to Colorado students.

Foreign Language
- German
- Latin I
- Latin II
- Latin III
- Latin IV
- Spanish I
- Spanish II
- Spanish III
- Spanish IV

Language Arts
- Contemporary Issues
- English I
- English II
- Intro to Composition
- Readers/Writers Workshop
- AP Literature and Composition

Mathematics
- Fundamental Math
- Algebra I
- Algebra II

- Geometry
- AP Calculus

Miscellaneous
- Career Exploration

Science
- Astronomy
- Biology
- Geology
- Health
- Issues in Biotechnology
- Introductory Physics
- AP Physics

Social Studies
- American Government
- U.S. History
- World Geography
- World History

Technology
- C++/Java Programming
- Web Page Development

Appendix C

Fall 2002 QAP Course Review Scores

Scale: 1= Beginning   2= Developing   3= Accomplished   4= Exemplary

Course	Content	Pedagogy	Overall
Foreign Language Aggregate	**2.55**	**3.44**	**3.08**
Latin I	2.19	3.30	2.75
Latin II	2.24	—	—
Latin III	2.40	—	—
Latin IV	2.29	—	—
German	2.53	—	—
Spanish I	2.76	3.38	3.07
Spanish II	2.76	3.46	3.11
Spanish III	2.76	3.54	3.15
Spanish IV	3.06	3.54	3.30
Language Arts Aggregate	**2.89**	**2.64**	**2.77**
AP Literature & Composition	2.91	—	
English I	3.71	2.5	
English 101a	2.65	2.75	
English 102a	2.53	—	
English 103a	3.00	—	
English 104a	2.47	—	
English 105a	3.00	2.67	
Math Aggregate	**3.63**	**3.20**	**3.42**
Algebra I	—	3.69	
Algebra II	—	3.15	
Calculus	3.82	—	
M100a (fundamentals?)	3.75	2.77	
M101a	—	—	
M103a	3.00	—	
M104a	3.94	—	
M105a	3.65	—	
Science Aggregate	**3.18**	**3.56**	**3.37**
Bio-Sci 100	3.82	3.46	
Geology Sci101a	3.29	4.0	
Health Sci 102a	2.65	—	
Biotech Issues Sci104	3.24	3.85	
Astronomy Sci 105a	3.29	3.85	
AP Physics	2.76	2.62	
Social Studies Aggregate	**3.21**	**3.77**	**3.49**
SS101aAmericanGovt	3.24		
SS102a	2.41		
SS103aGeography	3.53		
SS104a*	3.64	3.77	
Technology Aggregate	**2.94**	**3.45**	**3.20**
Tech 100 Web Development	—	3.6	
Tech 100a C++ Programming/Java	2.94	3.3	

*Reflects the composite score of three separate reviewers.

Appendix D

Sample Correspondence to Superintendents

 -----Original Message-----
From: Dam, Ai [mailto:dam_a@cde.state.co.us]
Sent: Friday, May 16, 2003 9:10 AM
To: Colorado School District Superintendents
Cc: Feder, Eric; tsnyder@sargent.k12.co.us
Subject: COLORADO ONLINE LEARNING NOTICE TO SUPERINTENDENTS

Colorado Online Learning (COL) Notice

Our Enhancing Education Through Technology (E2T2) grant calls for a differentiated price structure for high-poverty districts. Accordingly, the 118 districts on the attached Free/Reduced District list may access 2003/04 COL courses for a half-price rate of $100 per student/course/semester credit. Districts not on the list will need to pay $200 in behalf of participating students. These rates apply to summer 2003 courses too.

While tuition rates are kept low by the grant subsidy, we recognize that districts are challenged with providing more educational opportunities for students in reduced-resource environments. COL's 40+ courses can expand these opportunities for a cost significantly lower than state PPR broken out on a per-course basis. (The cost structure, however, is designed to support a student taking only one online course. The price per course goes up as students are enrolled in multiple courses.)

Many thanks are extended to those 70+ districts somehow finding the money to support this concept. We continue to receive testimonials from your students about having this opportunity but I know it is not an easy task to generate resources for yet another learning option. Districts who would like to know more are encouraged to contact me and I will be happy to come to your location. Three districts have asked for presentations within the next two weeks.

I've also attached the COL Summer Institute media release and the 2003/04 Info Summary so that you have more particulars. Please pass them on to appropriate staff in your districts. We're already receiving a lot of calls about the summer courses. Be sure to get the word out about the enrichment courses to your high-performing students. Some schools are passing on to students/families the cost of credit-recovery courses.

New courses for 2003/04 include Pre-Algebra, Fundamentals in Science, Psychology, French I, German II, Street Law, Colorado Aquatic Ecology and The Pen and the Petri Dish: Science Writing as a Literary Art Form.

It also appears that CU-Denver will award dual credit for selected COL courses next year. More details forthcoming.

On a personal note, COL has grown to the point that it requires my full-time attention so I have announced my resignation as superintendent of Sargent Schools. I look forward to being at the "full-time" forefront of Colorado's supplemental online learning arena. Please remember that our concept calls for students to remain in their local schools.

Many regards………..tim

Timothy D. Snyder, Ed.D.
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