

Reimagining High School in Colorado

Report of Governor Ritter's Graduation Guidelines Development Council

May 1, 2008



Process support by  The Adams Group
Facilitation • Public Engagement • Strategy

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Executive Summary

This report outlines the Graduation Guidelines Development Council's (Council) recommendations for the establishment of high school graduation guidelines. In the view of the Council, graduation guidelines should be a reflection of proficiency on identified standards. They are not a list of classes completed; are not solely measured by course credits attained; and are not solely measured by performance on one "high-stakes test." Instead, the Council recommends a paradigm shift from "seat time" to content mastery, and makes recommendations in the following areas:

1. Standards-based education

The 21st century demands standards that reflect both academic and applied mastery of workforce and postsecondary readiness. Mastery of the subject matter should indicate whether students have an adequate understanding of the content rather than whether they have taken a specific course as evidenced by time in the classroom. Therefore, the Council recommends a learning approach that focuses on mastery of content versus number of courses taken.

2. Core Curriculum to Meet the Needs of the 21st Century

The global economy demands that skills be transferable and application-based. A core curriculum that includes both academics and 21st century skills—and assessments that show that students can apply those skills—is needed to help students be successful in life. Therefore, the Council recommends that a core curriculum focus on 21st century skills and content.

3. Assessment

The Council believes that assessments are a powerful tool that should be used more often than just at the end of a learning process. In addition, assessments should be both theoretical and applied, and the state should make these assessments available to all districts statewide. As such, the Council recommends the use of multiple, student-based assessments that give students the opportunity to demonstrate what they have learned and that provide teachers with the data to assess student performance and level of proficiency.

4. Multiple and Diverse Pathways to a Diploma

The unique and individual aspirations of students should be recognized by creating multiple and diverse pathways for them to achieve diplomas. In order to recognize the different interests and abilities of all students, the Council

recommends adopting a pathways model that shows a clear connection to post-secondary life and that does not foreclose opportunities. In addition, dual credit should be recognized, so students have the opportunity to take as many courses as they want or need to earn both a high school diploma and post-secondary credentials.

5. Career Planning

The Council recommends putting more resources and a greater emphasis on career planning. Effective counseling will connect the current situation with a desired future. To that end, schools should consider ways to implement a Personal Education Plan (PEPs) (also referred to as an Individual Career and Academic Plan or ICAP) for each student.

6. Post-secondary alignment

The successful implementation of P-12 content standards is dependent upon an alignment of these standards with admission requirements for postsecondary education. Therefore, the Council recommends aligning P-12 content standards with postsecondary admission requirements—which requires revising the Higher Education Admission Requirements.

The Council recognizes that these recommendations require systemic changes, and that systemic changes require more resources—which are sorely lacking in education. However, in order for major reform of our education system to take place, a new system needs to be implemented, one that doesn't just align standards, but aligns the systems within the entire P-12 continuum. Finding the resources today for this realignment will be an investment in our students', state's and—ultimately—our nation's future.

Table 1: How High School Would Change with the Implementation of the Graduation Guidelines Development Council's Recommendations

	Today's World	Tomorrow's World
Standards	<ul style="list-style-type: none"> -Many content standards -Limited teacher staff development to support a standards-based model 	<ul style="list-style-type: none"> -Fewer academic standards -Additional standards for 21st century skills, character, and Career and Technical Education (CTE) -Significant teacher staff development to support and implement a standards-based model
Core	<ul style="list-style-type: none"> -No core standards required for graduation, only required courses in high school 	<ul style="list-style-type: none"> -Includes more focus on arts, citizenship, etc. -Core standards = Theoretical + Applied knowledge and skills
Assessments	<ul style="list-style-type: none"> -Measures annual progress of school or system, not students -Overall structure based on seat time and grades 	<ul style="list-style-type: none"> -Assessments measure each student's progress against a standard -Used to measure progress and to provide coaching, as well as overall mastery of standard -Allows longitudinal tracking of students -Overall structure is based on demonstrated mastery and learning at the student's pace, not years, grades, and seat time
Pathways	<ul style="list-style-type: none"> -One size fits all in high school -Mandatory courses + Unfocused electives 	<ul style="list-style-type: none"> -Diploma = Core + Thoughtful path of courses, experiences, etc., leading to an individualized achievement level -Diploma = Core + Additional academic and/or CTE achievement
Career Planning	<ul style="list-style-type: none"> -Only 25% of students receive some personal counseling for life beyond high school 	<ul style="list-style-type: none"> -Starts in middle school -Career planning = Tools + Personal counseling -College in Colorado widely used
Alignment	<ul style="list-style-type: none"> -Single, undifferentiated diploma -No alignment of standards with higher education entrance requirements -Transcript based upon seat time/grades -Remediation often required 	<ul style="list-style-type: none"> -Entrance requirements based upon mastery of standards -Standards-based transcript also available and used by higher education for entrance decision -Remediation greatly reduced

A Vision for High School in Colorado

“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”

--Alvin Toffler

High school should be a place that opens doors for students—doors to future education, work, and responsible, productive citizenship. High school needs to prepare today’s students for a tomorrow that has not yet been created. It is not enough for students to simply master content—students must also learn to think for themselves, to guide their own learning throughout life and to participate in creating the future. The new 3 R’s for the 21st century need to include Relevance, Relationships, and Rigor. These in turn will promote the fourth “R”—student responsibility (combined with parental involvement) for exploring his/her academic interests and career pathways and embracing the learning and skills necessary to succeed in a modern, global economy. And, in a democracy, high school needs to be effective and efficient for all young people, regardless of their ethnicity, socio-economic background, or whether or not they have special needs. Such a vision cannot be a reality without strong support from the public, including parents and employers, and it must be integrated with P-8 and higher education.

Introduction

Education has been appropriately identified by Colorado leaders as one of the most—if not *the* most—important issue to our state’s ongoing and future success. Education—from preschool through graduate school—currently is the subject of intense policy activity. Within this discussion, high school holds a very special place. It is the setting where many students begin to make decisions for themselves and set their future courses. It is where the transition from childhood to adulthood begins, where students can begin to clearly see the relationship between their present activities and the future, and where a transition occurs from a more general form of education that is offered to all to a more specialized post-secondary education and work. It is also the place where, unfortunately, many students fall through the cracks, leading to a future of closed doors and disappointment. High school plays a pivotal role in our education system and in our society, and it deserves special attention.

Technology and the globalization of the workforce have demanded that students graduate from high school prepared for an increasingly challenging future. Currently, only 72 percent of ninth graders in Colorado will graduate from high school four years later, and of the students who attend post-secondary institutions, nearly three out of 10 will require remedial coursework before they are ready for college-level coursework.¹ In order for Colorado—and our students—to be economically competitive in the national and global marketplace, a more rigorous curriculum is not enough. There also needs to be a focus on the 3 R’s—Relevance, Relationships, and Rigor—which in turn will promote the fourth “R”—student responsibility (combined with parental involvement) for exploring his/her academic interests and career pathways and embracing the learning and skills necessary to succeed in a modern, global economy.

In response to this urgent need, the Colorado legislature passed HB 07-1118, which established a process for developing state guidelines for high school graduation. These guidelines will suggest a model for school districts to meet or exceed when developing their own high school graduation requirements. In accordance with HB 07-1118, Gov. Bill Ritter appointed the Graduation Guidelines Development Council (Council) to develop and recommend to the State Board of Education (SBE) a comprehensive set of recommendations for the establishment of high school graduation guidelines. The Council has focused its work on the fundamental issues that must be addressed in order for those guidelines to be meaningful and to serve the needs of the state.

¹ *A Call for High School Reform*, by Gary Lichtenstein for the Colorado Children’s Campaign; Denver, CO, March 2003.

As part of their effort to understand how the public views education, the Council developed and conducted its own online survey. Some of the highlights include:

- The vast majority of respondents believe that post-secondary readiness and workforce readiness are primary outcomes of public education.
- Relevancy is important to improving the high school experience.
- While a large majority agree that students must master “core content” to graduate, an even larger majority believe that 21st century skills, such as problem solving, critical thinking, and effective use of technology must be an integral part of what we expect students to know and be able to do.
- The vast majority believe minimum graduation guidelines should prepare students for post-secondary education, at least as defined as “preparation to be successful in a community college and/or technical school.”
- Preparation through high school should be based on proficiency (standards and/or skills) and not on grade levels or age.
- High school graduation guidelines should include the arts, citizenship, and social sciences.

However:

- There is *not* agreement that preparation for post-secondary education is the same as preparation for the workforce; and
- There is *not* agreement that high school diplomas should *only* be granted when the student is “prepared” to enter a post-secondary educational institution.

(Survey results can be found in Appendix B.)

In addition to conducting this survey, the Council reviewed current literature, consulted with experts, studied the experiences of other states, held public meetings, and conducted interviews with key stakeholders (see Appendices C and D). Based on this process, the Council created this report for the SBE.

Issues and Recommendations

High school—both individual schools and as a social institution—faces a number of important issues and challenges in order to serve the needs of a 21st century society. Ultimately, in order to be successful, students must understand how to take the knowledge acquired in school and apply it to the real world. The global economy is not static, but dynamic; thus, our system of education must also be dynamic, and learning how to learn must be endemic in all learning opportunities.

In its charge to the Council, the state outlined four specific areas that need to be addressed when developing high school graduation requirements:

1. Standards-based education;
2. 21st century skills and standards;
3. Multiple pathways; and
4. Career planning.

Given this charge, the Council makes several recommendations to help Colorado meet its vision for high school. These recommendations are not exhaustive, but they do, in the view of the Council members, address the most important challenges facing our high schools today.

Standards-based education

As the Colorado General Assembly takes steps to further embrace the concept of standards-based education, the Council urges the SBE to set clear outcomes and expectations for student achievement and to use consistent ways to measure those outcomes. Twenty-first century standards being developed in Colorado should reflect both academic and applied mastery of workforce and postsecondary readiness. Postsecondary education readiness includes a successful transition to:

- two-year academic and career and technical colleges
- four-year colleges and universities
- trade apprenticeships
- military
- other career preparation pathways

This requires a paradigm shift from “seat time” as a measurement of true learning and content mastery. The following recommendation supports this paradigm shift:

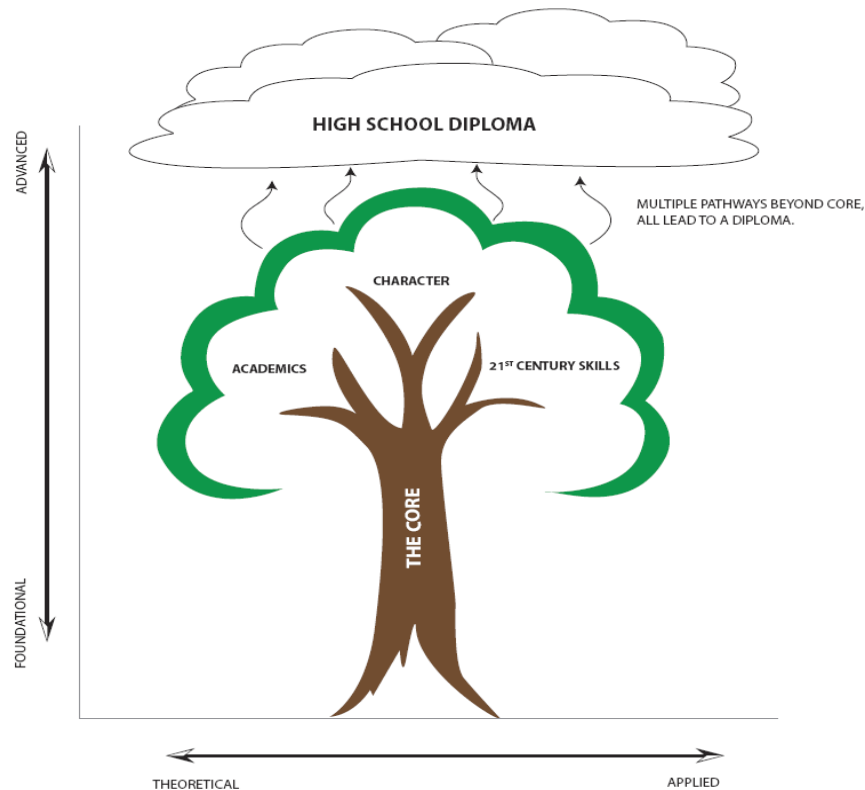
1. *Learning is the measure, not seat time.* Mastery of the subject matter should indicate whether students have an adequate understanding of the content rather than whether they have taken a specific course as evidenced by time in the classroom. This approach honors the unique learning styles of students by allowing those who master content quickly to move on and giving those who need more time to demonstrate mastery to take the time needed. The GGDC believes that, without the limits of time, all students can achieve, especially with the support of counselors, tutors, and online resources.

Core Curriculum to Meet the Needs of the 21st Century

The global economy demands that skills be transferable and application-based. High school graduates of the 21st century will hold several different jobs over the course of their lifetime, many of which haven’t even been created yet. A core

curriculum that includes both academics and 21st century skills—and assessments that show that students can apply those skills—is needed to help students be successful in life. The Council believes that the following characteristics describe a core curriculum:

- It is standards based;
- It completes the standards-based curriculum that begins in preschool and moves through the entire system;
- It is academic and focused on 21st Century skills;
- It is the primary focus of the first few years of high school (thus reducing drop-out rates);
- It is relevant to students' pathways; and
- It does not close doors the student may wish to go through in the future.



Students should have multiple paths to a high school diploma, and all would have a core and include components that are both theoretical and applied. All paths would also include academics, character and 21st Century Skills.

The Council makes the following recommendation regarding a core curriculum:

2. *Focus on 21st century skills and content.* Students should demonstrate competency not only in “core content,” but also in the following 21st century learning skills within the core content areas (from The Partnership

for 21st Century Skills). These skills should be embedded in the content students are learning:

- Information and media literacy
- Communication skills
- Critical thinking and systems thinking
- Problem identification, formulation, and solution
- Creativity and intellectual curiosity
- Interpersonal and collaborative skills
- Self-direction
- Accountability and adaptability
- Social responsibility
- Technology

Assessment

The Council believes assessments are a powerful tool that should be used more often than just at the end of a learning process. Too often in our education system, assessments are only cumulative or summative and not formative. As standards are developed and implemented, they should be supported by formative assessments that help teachers design interventions to support student mastery of standards. Further, assessments should be both theoretical and applied, and the state should make these assessments available to all districts statewide.

3. *Use multiple, student-based assessments that give students the opportunity to demonstrate what they have learned and that provide teachers with the data to assess student performance and level of proficiency (for example, portfolios, demonstration of mastery, teacher-generated assessments, formative assessments).* Different types of assessments may include, but are not limited to:
 - a. End-of-course assessment. Although many teachers use end-of-course assessments to determine course grades, they are typically not used to measure proficiency on standards. Students may choose to take a course assessment to “test out” of a certain course.
 - b. Application assessment. Students should be able to demonstrate that they have mastered skills in some way other than paper and pencil.
 - c. Multiple assessments that connect relevance of curriculum to students’ aspirations. Assessments are the glue between the curriculum, student learning, counseling, and student pathways. Every student should have an understanding of the connection

between what they are learning (relevance), how they are doing (assessments), and their choices of pathways (career planning).

d. Teacher recommendations for proficiency. Teachers should be empowered to offer multiple ways of measuring student mastery. For example, portfolios can be used to show students' proficiency or work in a variety of ways other than by the results of exams, and are especially useful for performance-based courses.

e. Dual transcripts. The successful implementation of P-12 content standards is dependent upon identifying the level of student mastery of these standards on a high school transcript. Because information of student learning is conveyed to employers and postsecondary education institutions only through a transcript, a high school transcript should accurately reflect student progress towards workforce and postsecondary readiness. The dual transcript format should reflect: 1) student mastery of content and workforce standards independent of courses taken; and 2) traditional Carnegie units and letter grades where letter grades reflect the level of student mastery of content and workforce standard imbedded in the course. In alignment with this, the SBE should reduce the overall number of content standards and benchmarks and go into more depth on fewer standards.

Multiple and Diverse Pathways to a Diploma

The unique and individual aspirations of students should be recognized by creating multiple and diverse pathways for them to achieve diplomas. However, these pathways need to have some coherence and should lead the way not just to a diploma, but to whatever comes after receiving it. The Council recommends the following guidelines on this topic:

4. *Adopt pathways models that show a clear connection to post-secondary life and that do not foreclose opportunities.* The pathways concept is intended to recognize the different interests and abilities of all students, and yet have all pathways lead to a valuable end point that would be recognized by a diploma. There is a fine line between pathways that limit a student's achievement and options and those that provide guidance without closing doors. The Council has studied the Colorado Career Cluster model with its embedded pathways, developed by the Colorado Community College System, and commends it. (See Appendix E for a sample.)
5. *Dual credit should be recognized.* Because a pathways model is student-centered, students will have the opportunity to take as many courses as they want or need to earn not only a high school diploma, but post-secondary credentials as well.

Career Planning

A proficiency-based high school system that gives students the opportunity to explore different pathways at their own pace puts the responsibility for learning on students. However, high school students are young and need guidance in preparing for their future. Therefore, the Council recommends that counseling and career services play a much greater role in the high school system.

6. *Emphasize career planning.* Counseling in Colorado high schools is, with little exception, dangerously understaffed. Skilled adults need to be available to help students wrestle with choices that will have great impact on their futures. There are many effective tools available to schools. Some will require schools to expend resources, such as ACT's Discover or Naviance; others are free, such as the Colorado Community College System Plans of Study (see Appendix F for a sample) and the Colorado Department of Higher Education's CollegeInColorado.org guidance system. Any of these could be adapted and adopted to empower and equip counselors with tools to effectively guide and implement comprehensive career planning. Effective counseling will connect the current situation with a desired future. To that end, schools should consider ways to implement the following:

- Prior to entering the ninth grade, each student should have in place a Personal Education Plan (PEP) (also referred to as an Individual Career and Academic Plan or ICAP). This plan will include both career and postsecondary educational exploration and pathways.
- The PEP/ICAP should be portable between schools and districts; between grade levels; and into the student's postsecondary activity, whether college or the workplace.
- The PEP/ICAP reflects the student's progress in postsecondary planning/career preparation.
- Each student will have the opportunity in high school to experience a real-world internship.
- Each student will have the opportunity while in high school to explore college campus(es).
- Each student will have the opportunity to experience community service.
- Each student will be familiar with the academic requirements of postsecondary education, whether a technical, community or four-year college.
- Each student will be familiar with the financial requirements and resources involved in pursuing postsecondary education.
- By the time he or she graduates from high school, each student will be prepared to apply either to college or the workplace.

Postsecondary Alignment

The successful implementation of P-20 content standards is dependent upon an alignment of these standards with admission requirements for postsecondary education. The alignment of P-20 content standards and postsecondary admission requirements ensures high school students participate in clearly outlined and sequenced standards, take assessment strategies seriously, and understand expectations of steps required across the educational systems for a particular career.

7. *Align P-20 content standards with postsecondary admission requirements.* Inherent in this recommendation is that the Colorado Commission on Higher Education revise the Higher Education Admission Requirements to reflect admission to four-year colleges and universities based on student mastery of content standards rather than solely on course titles and letter grades.

Conclusion

Nearly 75 percent of survey respondents believe that 21st century skills should be an integral part of what we expect students to know and be able to do. However, the current education system falls short of this standard. Many students are graduating high school without the necessary skills to succeed in post-secondary education or the workforce. The problem with most educational reforms is that they retool the system without also retooling the delivery strategies for that system. Major P-12 systemic changes and alignments need to be made in order for true reform to take place. What the survey results and community meetings have shown is that the public is ready for such a reformation. The Council believes that Colorado can become a leader in education reform—but only with support from all constituents—parents, employers, educators, and others.

With that in mind, the Council believes that it is important to engage parents in a constructive dialogue about their child's education. High schools need to find better ways of utilizing parents as assets by undertaking a concerted effort to inform them of what is going on, involve them in reform efforts underway, and to enlist their support. The same is true for employers. Because business has a need for high-quality workers and a strong economy, building relationships between education and business is critical, as well as mutually beneficial.

In addition, professional development, planning time, vertical teaming, and other supports should be offered to teachers to help them meet the needs of their students. At the district level, within the guidelines of state standards, local school boards should be able to offer multiple ways for students to meet those standards. Successes should be praised and shared with other school districts.

All this will require substantial investment of time and money to ensure thorough and uniform access to a first-rate P-12 education. This includes:

- The need for a comprehensive approach to uses of technology (by both educators and students) will require the assurance that schools, students, and teachers have access to adequate levels of bandwidth, equipment, and software.
- The combination of 21st century skills and postsecondary preparation with academic content standards will require a complete review of standards and assessments (a process also required by the CAP4Kids Bill, SB08-212).
- Implementation of a Personal Educational Plan (PEP) or Individual Career and Academic Plan (ICAP) will require an investment in training both educators and students in the uses of online planning.
- Professional development at all levels in the system will require time and money to ensure that educators are prepared to address the needs of 21st century students.
- The school year and school day may need to be adjusted to include opportunities for students to explore real-world applications of their learning and postsecondary explorations

That said, the Council believes that such an investment is necessary to serve the diverse needs of Colorado's growing student population, as the state prepares for a new economy in a new century. The return on this investment will ensure that Colorado's students are prepared to be effective, constructive, and productive citizens in a society where the only norm will be change.

Appendix A: Council Members & Staff

Council Members

- Mr. Art Bogardus, Executive Director, Pickens Technical College
- Ms. Kerry Harrell Lord, Principal, Yale Elementary, Aurora Public Schools
- Dr. Mark Hudson, Music Department Chair, CSU-Pueblo
- Dr. Helayne B. Jones, President, Boulder Valley School Board & Education Consultant
- Dr. John Lanning, Assistant Vice Chancellor for Undergraduate Studies, UCD
- Ms. Nina Lopez, VP Strategy & Operations, CO Children's Campaign
- Mr. Shatta Mejia, Principal, Lumberg Elem., Jefferson County
- Mr. Dan Morris, Director, Colorado Teaching, Learning, & Technology, UCD
- Ms. Karin Reynolds, Executive Director, Learning Services, Academy 20
- Mr. George Sparks, President & CEO, Denver Museum of Nature & Science
- Ms. Paula Stephenson, Executive Director, Colorado Rural Schools Caucus
- Dr. Randall Zila, Superintendent, St.Vrain Valley School District

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- Gina Bernacchi, Report Writer

The Council also wishes to thank Gully Stanford, Pre-Collegiate Partnerships, College in Colorado, for his valuable perspectives and contributions throughout this process.

Appendix B: Survey Results

What BEST describes your role? (NOTE: You may make 2 selections.)		
Answer Options	Response Percent	Response Count
Educator, K-12	60.9%	1598
Educator, Higher Education	10.4%	273
Policy Maker	2.9%	76
Parent (Currently have children in K-12)	24.4%	641
Community Member (non-parent or no children in K-12))	10.7%	280
Business Person	3.8%	101
Student	3.9%	102
Other	9.5%	250
Describe your role if you selected other		307
<i>answered question</i>		2625
<i>skipped question</i>		26

What BEST describes your community?		
Answer Options	Response Percent	Response Count
Rural	22.1%	582
Suburban	51.3%	1352
Urban	26.6%	702
<i>answered question</i>		2635
<i>skipped question</i>		16

What BEST describes where your community is located?		
Answer Options	Response Percent	Response Count
Front Range (Denver metro)	44.4%	1171
Front Range (non-metro)	30.9%	814
Mountain	7.2%	189
Northeast	5.2%	137
Southeast	7.1%	186
West Slope	5.3%	141
<i>answered question</i>		2637
<i>skipped question</i>		14

Your gender is		
Answer Options	Response Percent	Response Count
Female	70.8%	1841
Male	29.2%	760
<i>answered question</i>		2600
<i>skipped question</i>		51

What generation are you? When were you born?		
Answer Options	Response Percent	Response Count
1901-1924 - G.I. Generation	0.0%	1
1925-1942 - Silent Generation	1.8%	48
1943-1960 - Boomer	45.0%	1188
1961-1981 - Gen X	47.7%	1259
1982-2002 - Millennial	5.5%	146
<i>answered question</i>		2640
<i>skipped question</i>		11

What should be the primary outcome(s) of public education? How much do you agree or disagree with each of the following?							
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
a.) Post-secondary Readiness	1377	1087	117	47	8	1.566768	2636
b.) Workforce Readiness	1644	869	88	26	5	1.434271	2632
c.) Minimum competencies	1026	779	264	345	180	2.180416	2594
d.) Socialization and general education	967	1253	271	108	22	1.842045	2621
e.) Create thoughtful and responsible citizenry	1785	701	115	20	4	1.383619	2625
f.) Other	428	42	119	3	3	1.505882	595
Comments and/or Describe "Other";							624
answered question							2642
skipped question							9

How can the high school experience be improved? How much do you agree or disagree with each of the following?							
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
a.) Increase the rigor and expectations	928	1002	413	248	35	2.032749	2626
b.) Provide relevancy for the subjects taught	1638	855	117	19	3	1.43997	2632
c.) Integrate more career and technical opportunities	1474	926	184	38	10	1.550152	2632
d.) Increase the chance to apply content learned	1612	875	129	9	5	1.448669	2630
e.) Provide students with access to programs and	1711	820	86	12	3	1.395137	2632
f.) Other	381	27	92	4	3	1.463511	507
Comments and/or Describe "Other";							571
answered question							2642
skipped question							9

How can high schools motivate students to excel? How much do you agree or disagree with each of the following?							
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
a.) Offer students an opportunity to demonstrate	929	1050	384	226	34	2.003431	2623
b.) Provide internships to apply content learnings to	1236	1078	234	67	14	1.685812	2629
c.) Create high schools that are "career pathways" thus	1074	900	397	224	34	1.951693	2629
d.) Offer opportunities for participation in a variety of	1271	1085	214	45	10	1.643048	2625
e.) Offer students more "dual credit " opportunities that	1157	860	393	162	47	1.885834	2619
f.) Other	219	22	91	2	1	1.638806	335
Comments and/or Describe "Other";							411
answered question							2640
skipped question							11

The current high school experience is described by ... How much do you agree or disagree with each of the following?							
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
a.) is based on "time" spent in school	803	1083	340	332	52	2.136782	2610
b.) is a coursework-based requirement	736	1426	279	141	22	1.958141	2604
c.) is an experience which prepares one for post-	195	956	665	696	97	2.82522	2609
d.) offers a student multiple pathways to access	219	654	563	995	182	3.102181	2613
e.) is beneficial because it provides opportunities for	365	1080	580	432	115	2.553655	2572
f.) Other	180	35	105	12	8	1.920588	340
Comments and/or Describe "Other";							382
answered question							2628
skipped question							23

What skills should students to be required to have when they graduate from high school? How much do you agree or disagree with each of the following?							
Answer Options	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Rating Average	Response Count
a.) Core academic content competency	1518	1001	87	16	2	1.469131	2624
b.) Practical workforce experiences	855	1159	450	135	19	1.970206	2618
c.) Community service experiences	877	1186	403	122	27	1.943021	2615
d.) Ethical, financial, practical and health knowledge	1367	1066	142	41	7	1.572245	2623
e.) 21st century skills that include problem solving,	1967	597	51	12	3	1.28403	2630
f.) Other	253	12	78	0	3	1.520231	346
Comments and/or Describe "Other";							412
answered question							2632
skipped question							19

Minimum high school graduation guidelines should prepare all for post-secondary education(communitary college, 2-year community college, technical school).		
Answer Options	Response Percent	Response Count
Strongly Agree	36.0%	950
Agree	39.6%	1043
Neutral	7.9%	209
Disagree	13.3%	350
Strongly Disagree	3.2%	85
<i>answered question</i>		2636
<i>skipped question</i>		15

The requirements for preparation for the workplace are the same as those for post- secondary education(communitary college, 2-year community college, technical school).		
Answer Options	Response Percent	Response Count
Strongly Agree	15.4%	403
Agree	30.3%	795
Neutral	11.8%	311
Disagree	35.0%	919
Strongly Disagree	7.5%	198
<i>answered question</i>		2625
<i>skipped question</i>		26

The experience and offerings for students in rural schools should be equivalent to those offered to students in urban or suburban school districts.		
Answer Options	Response Percent	Response Count
Strongly Agree	41.4%	1092
Agree	40.9%	1079
Neutral	9.8%	259
Disagree	6.9%	182
Strongly Disagree	0.9%	25
<i>answered question</i>		2636
<i>skipped question</i>		15

Students should be able to progress through high school based on proficiency regardless of grade level or age.		
Answer Options	Response Percent	Response Count
Strongly Agree	30.0%	787
Agree	40.5%	1062
Neutral	15.3%	401
Disagree	12.2%	319
Strongly Disagree	2.0%	52
<i>answered question</i>		2620
<i>skipped question</i>		31

High school graduation guidelines should include education in the arts, citizenship and social sciences.		
Answer Options	Response Percent	Response Count
Strongly Agree	58.7%	1532
Agree	32.9%	859
Neutral	6.3%	165
Disagree	1.9%	50
Strongly Disagree	0.2%	6
<i>answered question</i>		2611
<i>skipped question</i>		40

Every high school student in Colorado should be required to meet the same set of minimum requirements in order to receive a diploma.		
Answer Options	Response Percent	Response Count
Strongly Agree	31.7%	832
Agree	32.8%	862
Neutral	12.3%	324
Disagree	16.7%	438
Strongly Disagree	6.5%	171
<i>answered question</i>		2626
<i>skipped question</i>		25

High schools should make available different types of diplomas to students depending upon what each student has learned or is prepared to do after high school.

Answer Options	Response Percent	Response Count
Strongly Agree	20.9%	547
Agree	31.2%	815
Neutral	16.9%	442
Disagree	20.5%	535
Strongly Disagree	10.6%	277
<i>answered question</i>		2615
<i>skipped question</i>		36

A Colorado high school diploma should only be granted when a student is prepared to enter into a Colorado post-secondary education (community college, 2-year community college, technical school).

Answer Options	Response Percent	Response Count
Strongly Agree	8.4%	221
Agree	19.7%	516
Neutral	15.0%	392
Disagree	36.5%	957
Strongly Disagree	20.4%	535
<i>answered question</i>		2620
<i>skipped question</i>		31

Appendix C: Experts Providing Testimony to the Council

Higher Education:

- Matt Gianneschi, Governor's office
- David Skaggs, CCHE
- Scott Mendelsberg, GEAR UP
- Geri Anderson, CO Community College System
- Gully Stanford, Pre-Collegiate Partnerships, College in Colorado

K-12 Education:

- Gerald Keefe, Superintendent, Kit Carson Schools
- Charlotte Ciano, Superintendent, Mapleton and DASSC
- Kyle Morin, Student CU Denver
- Dwight Jones, Commissioner, Dept of Education

Business and Military:

- ACHIEVE, and the American Diploma Project
- Col. Alan Klayton, United State Air Force Academy
- Julie Haeflinger, Pickens Technical College, Middle College
- John Sepich, COMSTEC

Preparations and Pathways:

- Joe Garcia (invited), P-20
- Dr. Linda Bowman, Community College of Aurora
- Karen Lewis, AVID
- Reverend Steve Planning, Arrupe Jesuit High School
- Kerry Hart, Mountain College
- Linee Perroncel, Denver School of the Arts
- Roger Sampson, Education Commission of the States

Appendix D: Summary of Comments on Key Issues from Public Meetings

As part of its efforts to engage the public in a dialogue about graduation guidelines, the Council, in collaboration with the SBE, held six regional forums across Colorado. These forums included educators, policymakers, parents, business people, students, and other interested community members. Dates and locations included:

- Feb. 20, 2008—Frisco
- March 17, 2008—Jefferson County
- April 1, 2008—Colorado Springs
- April 15, 2008—Denver
- April 21—Denver
- April 22—Grand Junction

Participants discussed a variety of issues, from the purpose of education to how high school can best be improved. Some of the topics discussed and participants' comments were:

1. Primary outcome of education

- Participants agreed that “post-secondary readiness” and “creating thoughtful and responsible citizenry” were the top two outcomes of education.
- “Workforce readiness” was also a high priority.
- Some participants commented that workforce readiness gets overlooked in public education’s quest to prepare students for college, but that it should be emphasized, especially as we look toward the 21st century and global technology.

2. “Seat time” versus course-specific assessments

- “Proficiency” needs to be defined.
- Implementation of a more individualized focus is not easy, especially in public education.
- There must be alignment between K-12 and higher education.
- Assessments must be carefully designed with educator input and must take into account differentiation of learning styles.

3. Requirements for workplace versus post-secondary education

- Many discussed the issue of at-risk and rural youth whose life goals may not include post-secondary education.
- Since the skills they will need are not necessarily the same as those for post-secondary education, the fear is the drop-out rate for these students will increase if their studies are seen as irrelevant to their needs.

- Post-secondary content is academic; workplace skills are not. Therefore, the two are not synonymous and should not be lumped together.
- On the other hand, participants were concerned about narrowing students' choices or pigeon-holing students if the two are separated.
- All students must have the opportunity to go to college, even if they choose not to do so immediately after high school.

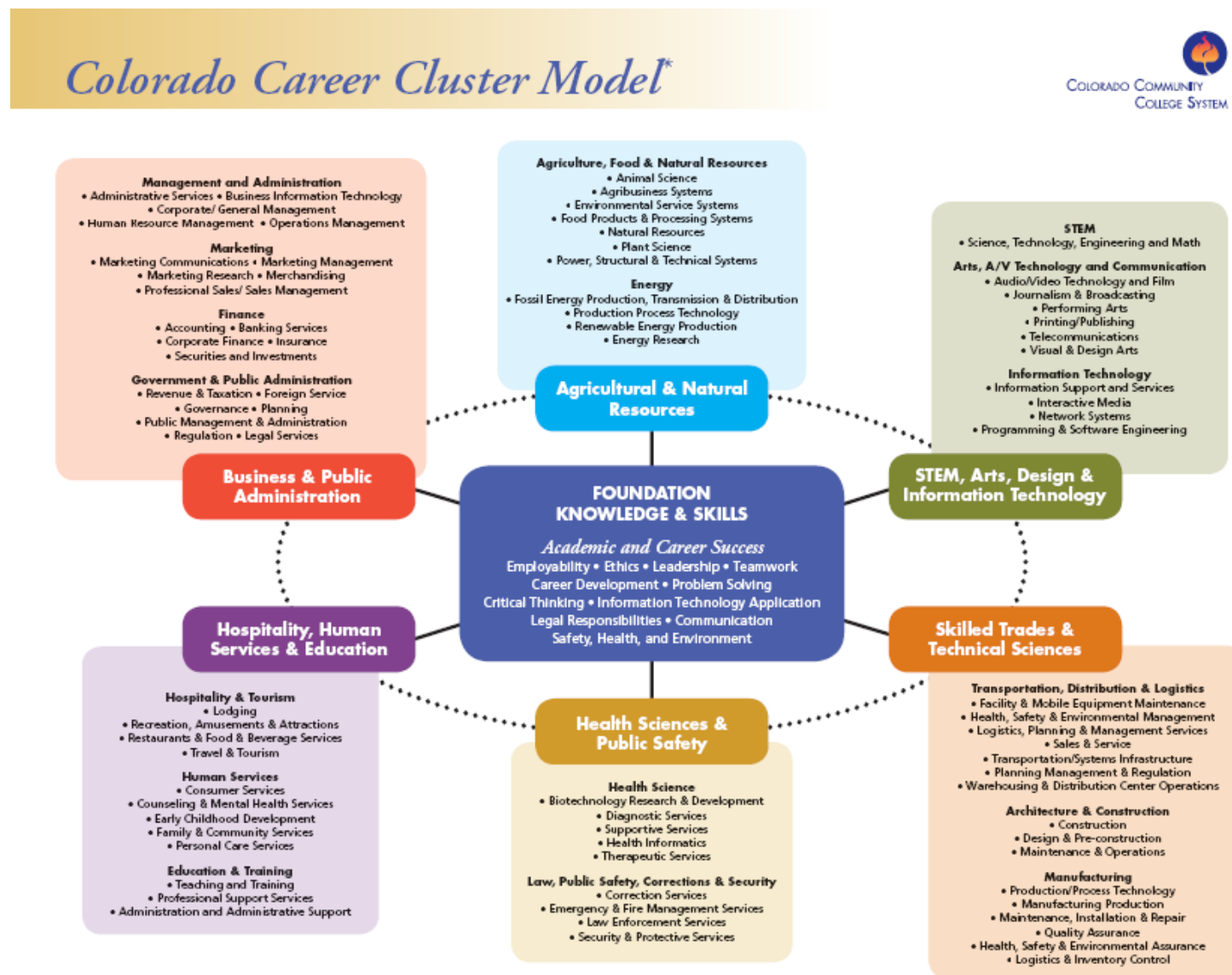
4. Minimum high school graduation requirements

- All students should have the skills to go forward and make their own decisions.
- Minimum requirements are necessary in order for a diploma to be transferable from one post-secondary institution to another.
- Rural districts often cannot deliver the same opportunities as other districts.
- It isn't realistic to expect *every* student to meet the standards, but it is realistic to expect that every student can be successful given the opportunity.
- The bar should be set high, and we should expect all students to aim for that bar.
- Time needs to be the variable, so every child is proficient in the competencies.


5. Improving high school

- Curriculum needs to be relevant.
- High school standards need to be aligned with students' future goals.
- We need higher expectations, which means more rigorous coursework because students are not being challenged enough.
- Focus should be on giving students what they need to make the right choices about their futures.
- More creativity in learning should be integrated into the curriculum.
- System needs to be flexible enough to accommodate those who master the content faster and those who need more time.
- Support systems, such as counselors, mentors, and tutors, are needed.

Appendix E: Sample Colorado Career Cluster Model



Appendix F: Sample Colorado Community College System *Plans of Study*

		Pathway: Health Informatics		
		Plan of Study: Medical Administration		
Career Goal (O*Net Code): Examples: Healthcare Administrator (11-9111), Medical and Health Services Manager (11-9111). Medical Secretary (43-6013), Medical Assistant (31-9092).				
Suggested High School Courses				
High School * Default includes CDHE Higher Education Admission Requirements	9 th	Core Academic Courses*:	English I, Algebra I, Biology, State History/Civics	Suggested Electives: Computer Applications Physical Education
		Career Path Courses:	Health Science Technology I - Introduction to Health Science	
	10 th	Core Academic Courses*:	English II, Geometry, Chemistry, US History, Foreign Language I	Suggested Electives: Psychology
		Career Path Courses:	Health Science Technology II - Health, Safety, and Ethics	
	11 th	Core Academic Courses*:	English III, Algebra II/ or other, Chemistry	Suggested Electives: Accounting
		Career Path Courses:	IHealth Science Technology III - Employment in Health Occupations	
	12 th	Core Academic Courses*:	English IV, Trigonometry or other Math, Physics or other lab based science	Suggested Electives: Business Foundations
		Career Path Courses:	Health Science Technology IV - Medical Office Emphasis	
Secondary to Postsecondary Linkages & Certifications				
Recognition for Advanced Learning	Postsecondary Credit Options: HPR 100 Intro to Health, HPR 101 Customer Service in Health Care, HPR 104 Health Career Options, HPR 106 Law & Ethics, HPR 178 Medical Terminology, MOT 136 Intro to Clinical Skills			
	Industry Recognized Certificate(s) or License(s): Billing and Coding; CMA			
		Postsecondary Programs Available in Colorado	Colorado Institutions	Entrance Exams/ Requirements
Postsecondary Education Opportunities	Certificate	Medical Office Technology: Medical Office Management/Administration, Medical Administrative Assistant, Certified Medial Assistant (CMA)	AVS: Emily Griffith Opportunity School, Pickens Technical College Community Colleges/Colleges: Aims CC, CC of Denver, Front Range CC, Lamar CC, Morgan CC, Arapahoe CC, Pikes Peak CC, Red Rocks CC, Trinidad State Junior College	High School diploma/GED
	Associate Degree	Medical Administrative Assistant, Medical Office Technologies; Medical Assistant, Medical Practice Manager	Aims CC, Mesa State College, Front Range CC, Morgan CC, Arapahoe CC, Pikes Peak CC, Red Rocks CC	High School diploma/GED
	Bachelor's Degree	Health Care Management	Metropolitan State College of Denver More options at: www.collegeincolorado.org	See each school's Admissions website.
	Graduate Degree	Health Care Administration, MS; International Health Management and Policy, MS; Executive MBA (Health Administration); Public Health, MPH	Univ.of Colorado-Colorado Springs, Univ.of Colorado-Denver, Univ. of Colorado-Denver Health Sciences Center, University of Northern Colorado www.collegeincolorado.org	See each school's Admissions website.

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Cluster Overview: The **Health Science Career Cluster** prepares students for careers in planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Extended Learning Experiences

Curricular Experiences:

Example:
Health Occupations Students of America

Extracurricular Experiences:

Examples:
National Youth Leadership Forum on Medicine
Medical Mission Trips
Special Olympics

Work-Based Learning Experiences:

Career Preparation – Paid and Unpaid, Job
Shadowing, Internships

Program Accreditation and/or Professional Association(s):

Examples:
American Association of Medical Assistants Endowment
Association of University Programs Health Administration
National Commission for Health Education Credentialing
American Public Health Association

Service Learning Experiences:

Example: Community Service Volunteer

Career Options:		Salary Range:
Certificate	Medical Billing Clerk, Medical Office Assistant	\$ - \$\$
Associate Degree	Medical Secretary	\$ - \$\$
Bachelor Degree	Healthcare Administrator, Medical and Health Services Manager, Public Health Educator, Patient Advocate, Data Analyst	\$\$ - \$\$\$\$
Graduate Degree	Researcher, Healthcare System Manager, Medical Consultant, Public Health Administrator	\$\$\$ - \$\$\$\$

- \$ = \$15-25,000; \$\$ = \$25-55,000; \$\$\$ = \$55-90,000; \$\$\$\$ = Above \$90,000

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