
2011 Annual Report

Maine Course Pathways Project



*Submitted to: The Maine Department of Education
Prepared by: The Educational Policy Improvement Center*

Contents

About EPIC	4	Data and Results	12
Executive Summary	5	Standards Submitted for Review	12
2010–2011 Project Activities	6	Review Results by Content Area	13
Professional Development Activities	6	Syllabus Development Experience	13
Scoring Guide Revisions and Development	7	Teacher Survey	14
Maine Course Pathways System Enhancements	7	Findings and Recommendations	17
Gray-New Gloucester High School Contract	8	Conclusion	18
Sample Syllabus Development	8	Appendix A	
Maine Course Pathways Video	8	Project Background and System Design	20
Participation and Syllabus Submission	9	Appendix B	
Teacher Accounts	9	Participation by Content Area and School	30
Syllabi of Record	9		
Content Area Reviews	10		

About EPIC



The Educational Policy Improvement Center (EPIC), a 501(c)3 nonprofit organization, seeks to help policy makers and policy implementers alike do a better job of using educational policy as a tool to improve schooling and student learning. EPIC works with federal agencies, state education departments, non-governmental organizations, private foundations, and school districts to support research on a range of issues in the areas of high school-to-college articulation, adequacy funding, large-scale assessment models, and other policy initiatives designed to improve student success.



Executive Summary

The Maine Department of Education has partnered with EPIC since 2007 to develop a system for determining the degree to which high school students are given the opportunity to learn all required state standards. The goal is to help schools validate curriculum and academic programs while also maintaining local control over the content and sequencing of courses.

To accomplish this goal, high school teachers submit course syllabi aligned to the Maine *Learning Results* (MLR). To create their syllabi, teachers use online software and Scoring Guides that explicate the standards. These guides break the standards down into essential components and provide definitions and examples in order to convey the intention of the standards. As part of the Maine Course Pathways project, syllabi undergo review by a panel of trained content area experts. The experts use the Scoring Guides to make accurate, consistent judgments about evidence in the syllabus of alignment with the MLR. Next, educators use software to analyze four-year pathways, or combinations of courses, to identify whether or not the pathways provide students the opportunity to learn all MLR in a content area. This analysis helps schools identify which course pathways cover all MLR, and which pathways need additional content. Schools can then make adjustments to course content and/or syllabi. For more detail on the Maine Course Pathways project background and system design, please see Appendix A.

The 2010–2011 school year was a development year with focus on professional development to help participants implement Maine Course Pathways and, in particular, to further hone teachers' capacity to document standards in syllabi. This report provides an overview of the activities during the 2010–2011 contract year, as



well as recommendations for the future of the Maine Course Pathways project. Accomplishments in 2010–2011 include professional development activities, sample syllabus development, Scoring Guide revisions, and system enhancements. There was an increase in syllabus confirmation rates suggesting that these activities were helpful in understanding the MLR and how to convey them in syllabi. The project also developed a promotional video, which can be used to quickly convey the purpose and benefits of the project to current and potential participants.

Recommendations for future work include building participation by existing schools; adding new schools; integrating the Common Core State Standards for ELA/literacy and mathematics; continuing professional development activities with a combination of webinars and on-site teacher and administrator trainings; expanding teacher resource material, syllabus examples, and review feedback; and finally, making Maine Course Pathways system enhancements to ensure the most effective use by teachers and administrators.

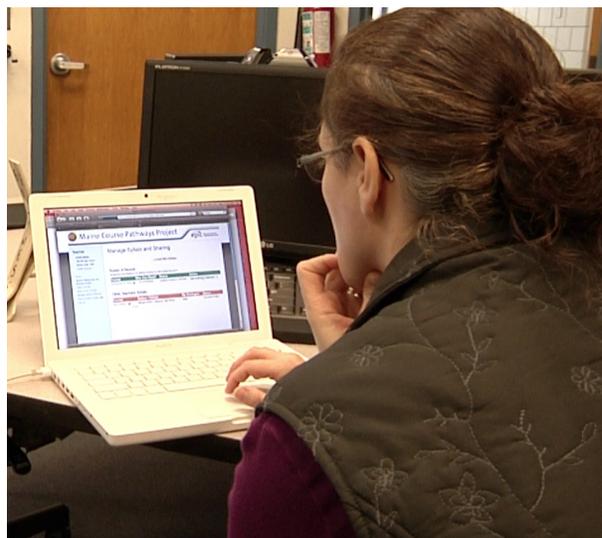
2010–2011 Project Activities

Professional Development Activities

Professional development was a focus of the project during the 2011–2012 year. EPIC held training sessions in Maine during the summer and school year. The professional development model concentrated on training lead teachers in syllabus development to give them strategies to use when working with teachers at their schools. Training was also provided to administrators to give them strategies for supporting the implementation of the Maine Course Pathways project.

As part of the Gray-New Gloucester High School contract (see page 9), EPIC staff held a workshop for staff at Gray-New Gloucester High School in June 2010. The workshop provided an update on GNGHS's participation and review status to date, and information on creating syllabi. EPIC staff also discussed the connection between Maine Course Pathways and standards-based performance assessment.

In September 2010, EPIC staff conducted several workshops for participants, the first of which was a workshop in Auburn intended for teacher leaders, who would then distribute information to their schools. The session included a SyllabusMaker overview, Course Pathways tool demonstration, further training on Scoring Guides and discussion of syllabus review. Because they were new and had a sizeable number of participants, an additional workshop covering the same content was held for all teachers at Sanford High School. EPIC staff also conducted a training session for administrators in Augusta. The training included instruction on how to use course pathways for curriculum planning,



a review of syllabus activity, and an overview of school resources for implementing the project.

In January 2011, in order to allow an opportunity to discuss issues specific to Career and Technical Education (CTE) centers, the Maine Department of Education hosted a workshop for administrators and teachers from CTE centers. The workshop included an in-depth look at a sample CTE program syllabus and the Scoring Guides, a system walkthrough and Q & A session by EPIC. Issues raised by CTE staff included the desire to collaborate with other schools creating syllabi for the same program(s), the difficulty of aligning applied CTE curriculum with the academic standards of the MLR, and the need to collaborate with high schools.

In March 2011, EPIC staff conducted seven days of on-site training for schools involved in the Maine Course Pathways project. Since teachers at participating schools had varying degrees of experience and knowledge of the project, the goal of the trainings was to provide focused

work sessions on syllabus development and Scoring Guide use. Some school administrators also requested an overview of the project for new teachers. A total of 154 teachers and administrators were trained at these sessions. Group and individual trainings were provided at Oak Hill High School (12 participants), Gray-New Gloucester High School (10), Tri-County Technology Center (1), Hodgdon High School (13), Belfast Area High School (27), Sanford High School (59), Messalonskee High School (8), Mid-Coast School of Technology (15), Kenneth Foster Regional Applied Technology Center (4), and Lewiston Regional Technical Center (5).

Scoring Guide Revisions and Development

Contracted expert reviewers worked with the Maine Department of Education content specialists to review and revise scoring components, decision rules, and include samples of evidence. To accomplish this work, senior reviewers traveled to Maine in Summer 2010 to work one-on-one with the content area specialists. The work ensured that the scope of the decision rules was appropriate for a single high school course. In some cases, the scope of a decision rule had to be expanded from the prior “unit” scope, and in some cases, the scope had to be narrowed to describe a component that could be taught in a single course.

In Summer 2011, new Scoring Guides were developed for World Languages and Career and Education Development (C&ED). For C&ED, EPIC staff worked with the Maine Department of Education content specialist to create a new Scoring Guide for grades 9 through diploma. Teachers will now be able to include C&ED content in syllabi for a wide variety of courses. The 2010–11 World Languages work revised the existing Scoring Guide, which was based on the Performance Indicators from the 9–Diploma grade band of the MLR, and developed two additional Scoring Guides for the 6–8 and the 3–5 grade bands. The Maine Department of Education World Languages content specialist recommended the

development of the additional Scoring Guides in order to allow greater participation of World Language teachers who teach courses that introduce students to language study. First- and second-year language courses do not typically reach the level of language proficiency that is expected in the 9–Diploma grade band; thus, when there was only one Scoring Guide, first- and second-year courses were generally not included in Pathway analyses. All teachers in the Maine Course Pathways project will be trained on these new Scoring Guides in the 2011–2012 contract year.

Maine Course Pathways System Enhancements

Another focus of the project during the 2011–2012 contract year was refining methodology and making enhancements to the Maine Course Pathways online system. Changes included the following:

- Reviewers may now look for evidence of each standard anywhere in the syllabus, rather than in a specific unit the teacher indicated.
- Schools may now see standards in the Pathways reports that the teacher has submitted but have not yet been reviewed.



- Teachers who had access (read or edit) to a syllabus when it was first created and submitted have the same access in subsequent submissions.
- Teachers view an updated feedback report that is more visual and does not contain vague and sometimes confusing statements of rationale.

Gray-New Gloucester High School Contract

In addition to the primary 2010–2011 Maine Course Pathways contract, EPIC collaborated with the Maine Department of Education to provide support on standards alignment and syllabus development to Gray-New Gloucester High School (GNGHS) and Maine School Administrative District 15 (MSAD 15) to supplement their work with the Next Generation Learning Partnership (NxGL).

Following on-site professional development in June, EPIC provided ongoing support to GNGHS teachers in the development of syllabi. GNGHS teachers received additional syllabi review, if requested. At the conclusion of the contract, EPIC provided validated Pathways to GNGHS departments to show the extent to which the syllabus reviews confirmed student opportunity to learn Maine's *Learning Results*. EPIC also participated with Maine Department of Education and GNGHS in planning for performance-based assessment and standards alignment within the MSAD 15 NxGL Partnership.

Sample Syllabus Development

Gray-New Gloucester High School's contract included funds to develop syllabus examples to help teachers understand the requirements of the Maine Course Pathways project, as recommended in last year's findings. These documents provide examples of the level and type of detailed evidence required by the Scoring Guides, in order to confirm the standards the teacher has indicated.

Two teachers in each of the seven current content areas worked with EPIC staff and a syllabus

reviewer from their content area to increase the level of detail in their existing syllabus. They discussed ways to improve the documentation of standards in their course. After the teacher had incorporated this feedback, the syllabus was made available to other teachers in the Maine Course Pathways online system.

Maine Course Pathways Video

In an effort to raise awareness about the Maine Course Pathways project, a 9.5 minute video was developed to efficiently convey the purpose and benefits of the project. Two high school administrators, five high school teachers, two Maine Department of Education administrators, and two Maine Department of Education content specialists were interviewed. Student classroom, teacher training, school interior and exterior, and capitol building video footage were also captured to supplement the interviews. The video will be used to promote and educate constituents about the Maine Course Pathways project and to recruit additional schools to join the project. The video is posted on EPIC's Maine Course Pathways webpage at <https://epiconline.org/maine>.



A screenshot of the Maine Course Pathways video

Participation and Syllabus Submissions

The following section provides an analysis of the results from the 2010–2011 syllabus submission and review cycle which took place in spring 2011.

Six high schools and three Career and Technical Education (CTE) centers submitted syllabi to Maine Course Pathways in 2010–2011. Three of these schools were new to Maine Course Pathways. **Table 1** shows the number of teacher accounts, syllabi of record, and content area reviews for each school. Some schools that had participated in previous years chose not to participate this year due to lack of time or wanting to wait for the system to integrate the Common Core State Standards. Appendix B provides participation information by content area and school.

Teacher Accounts

Gray-New Gloucester High School and Sanford High School had the most teacher accounts in the online system, with 47 each. Belfast Area High School and Oak Hill High School also had higher participation numbers. Mid-Coast School of Technology, Messalonskee High School, Sanford Regional Vocational Center, and Tri-County Technical Center each had fewer than 10 teacher accounts. There are some instances of multiple teachers sharing one account, so it is possible there are more teachers collaborating on syllabi than these numbers reflect. The project encourages collaboration among teachers using their separate accounts, but some choose to collaborate using only one individual login.

Syllabi of Record

The term *syllabus of record* refers to a syllabus that is identified by the school administrator as the official syllabus of a course at the school. It is the syllabus that receives external review. If multiple teachers teach the same course, they are asked to work together to develop a common syllabus and align standards. Belfast Area High School and Gray-New Gloucester High School submitted the most syllabi of record, followed by Oak Hill High School. Messalonskee and Sanford High Schools, in their first year of the project, submitted small numbers as teachers and entire departments

Table 1. *Maine Course Pathways Participation by School, 2010–2011*

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	44	69	76
Gray-New Gloucester High School	47	68	73
Hodgdon High School	14	13	16
Messalonskee High School	7	4	4
Oak Hill High School	35	47	59
Sanford High School	47	8	10
CTE Centers			
Mid-Coast School of Technology	8	4	6
Sanford Regional Technical Center	1	1	1
Tri-County Technical Center	1	3	8
Totals	204	217	253

chose to collaborate on one or two syllabi. This served the dual purpose of acclimating teachers to the process and fostering curricular collaboration. Thus 47 Sanford teachers created accounts, but submitted 8 syllabi. At Messalonskee, 7 teachers created accounts and submitted 4 syllabi, as teachers worked in pairs to submit one syllabus.

We would expect CTE centers to have smaller numbers than sending high schools, since they have fewer discrete programs of study. Accordingly, each CTE center submitted fewer than 5 syllabi of record.

Content Area Reviews

Table 2 shows the total number of reviews in each content area by school. The nine participating schools submitted 217 syllabi of record, which yielded 253 content area reviews, or the number of

syllabi reviews in a single content area. Because 13 courses contained standards from multiple content areas, and because syllabi could be reviewed more than once, the number of content area reviews is higher than the number of syllabi of record. For example, a Chemistry course might contain both Science & Technology and Mathematics standards, which requires two content area reviews. In addition, the teacher might edit and resubmit the syllabus for a second round of review, yielding four content area reviews in total.

English Language Arts had the most reviews (46). Health Education & Physical Education and World Languages had the fewest reviews, at 23 each. The lower number in World Languages might be explained by the fact that in several districts, students do not have exposure to World Languages MLR prior to high school; thus, teachers

Table 2. Content Area Reviews, by School and Content Area

	English Language Arts	Health Education and Physical Education	Mathematics	Science and Technology	Social Studies	Visual and Performing Arts	World Languages	Total content area reviews by school
High Schools								
Belfast Area High School	15	8	15	14	16	5	3	76
Gray-New Gloucester High School	16	5	12	6	6	16	12	73
Hodgdon High School	4	1	1	8	2	0	0	16
Messalonskee High School	1	0	1	1	1	0	0	4
Oak Hill High School	5	6	7	6	13	16	6	59
Sanford High School	2	0	1	1	3	1	2	10
CTE Centers								
Mid-Coast School of Technology	1	1	3	1	0	0	0	6
Sanford Regional Technical Center	0	0	0	1	0	0	0	1
Tri-County Technical Center	2	2	2	2	0	0	0	8
Total content area reviews by content area	46	23	42	40	41	38	23	253

of first- and second- year courses primarily teach standards below 9–Diploma. This year, World Languages teachers were encouraged to submit only third- and fourth- year courses.¹ Another explanation for the relatively lower numbers in both content areas is that some schools focus on achieving success in the core content areas before attempting to create syllabi in other content areas.

Career and Technical Education centers submitted 15 content area reviews. Mid-Coast School of Technology and Tri-County Technical Center have each participated in multiple years of the project; Sanford Regional Technical Center was new this year and focused on submitting one syllabus, for the Engineering Technology program. Of the 13 syllabi submitted statewide that contained standards from more than one content area, four of these came from CTE centers.



¹New Scoring Guides for World Languages—that include a broader range of proficiency levels—were developed in response to this issue.

Data and Results

Standards Submitted for Review

Table 3 shows the Maine *Learning Results* standards most frequently included in submitted syllabi, by content area. In some cases, the highest frequency occurs with standards that might be considered process-oriented standards. For example, in Visual and Performing Arts, standards C. Creative Problem-Solving and D. Aesthetics and Criticism are applicable across the entire content area, and this might be the reason they were more frequently submitted. By comparison, A. Dance Disciplinary Literacy, which only applies to a subset of the Visual and Performing Arts courses, is one of the least frequently included standards.

Each content area has two junior reviewers and one senior reviewer. The senior reviewer serves as the adjudicator if the two junior reviewers disagree on a decision. Reviewers are content area experts who bring considerable teaching experience as postsecondary faculty or as high school teachers. Reviewers complete an orientation process that consists of practice reviews and facilitated discussion of those practice reviews and the Scoring Guides.

Table 3. Standards Most Frequently Included in Syllabi, by Content Area

Content Area	Most Frequently Included Standard	Second Most Frequently Included Standard
English Language Arts	Research (C)	Language (D)
Health Education & Physical Education	Movement/Motor Skills and Knowledge (G)	Personal and Social Skills and Knowledge (I)
Mathematics	Number (A)	Geometry (C)
Science & Technology	The Skills and Traits of Scientific Inquiry (B)	The Scientific and Technological Enterprise (C)
Social Studies	Applications of Social Studies Processes, Knowledge, and Skills (A)	History (E)
Visual & Performing Arts	Creative Problem Solving (C)	Aesthetics and Criticism (D)
World Languages	Communication (A)	Connections (C)

Review Results by Content Area

Table 4 shows the percentage of reviewed components confirmed in each content area. Health Education and Physical Education had the highest confirmation rate (98%), and Science and Technology, Social Studies, and World Languages had the lowest (60–61%). The variation among content area percentages of components confirmed may stem from different factors: (1) variation in teachers' experience developing and writing curriculum; (2) differences among content area Scoring Guides or syllabus reviewers, in terms of relative leniency or scope of decision rules.

Syllabus Development Experience

As teachers receive and incorporate reviewers' standards alignment feedback, they are encouraged to resubmit the syllabus for a subsequent review. At schools that have participated in Maine Course Pathways for multiple years, syllabi have been submitted up to four times. Schools just starting work this year have submitted their syllabi only once. Revisions generally consist of adding curricular description to the syllabus to bolster evidence of particular

standards or, once greater understanding of a standard is gleaned, removing standards from the course that are not taught at the level the standard specifies. Both of these fulfill professional development goals of Maine Course Pathways relating to helping teachers better understand the standards, according to Maine's *Learning Results* and the Maine Course Pathways Scoring Guides, and ultimately teach them more successfully.

Table 4. Percentage of Reviewed Components Confirmed, by Content Area

	% Reviewed Components Confirmed
English Language Arts	74
Health Education and Physical Education	98
Mathematics	68
Science and Technology	61
Social Studies	60
Visual and Performing Arts	77
World Languages	60



“I found it very useful to go through the process and look at our curriculum over four years. The conversations that were had and the decisions that were made by the teachers at each grade level were very valuable.”

— Teacher at Oak Hill High School

Table 5 shows component confirmation rates and the number of syllabi submitted at each submission level. “Number of Times Submitted” refers to the number of times a syllabus has been submitted for review. The total number of syllabi at each submission level is included in parentheses in the first column. Each syllabus is only counted once, at the highest level of submission. “Average Percent of Components Confirmed per Syllabus” shows that component confirmation, in general, increases with each subsequent submission.

Table 5. Confirmation Rate by Number of Times Submitted

Number of Times Submitted	Average Percent of Components Confirmed per Syllabus
One (159)	45%
Two (93)	67%
Three (100)	80%
Four (18)	85%

Teacher Survey

In June 2011, EPIC conducted a survey using an online survey collection instrument to gather teacher feedback. The majority (89%) of the 153 teachers who responded came from four high schools: Belfast Area High School, Gray-New Gloucester High School, Oak Hill High School, and Sanford High School. Smaller numbers responded at Hodgdon High School and Mid-Coast School of Technology, which was the only Career and Technical Education Center that participated.

Slightly over half of the respondents identified themselves as Mathematics or Science & Technology teachers. English Language Arts and Social Studies teachers made up approximately 40% of the sample, and Health Education & Physical Education and World Languages had nine teachers each.

Themes from the feedback are detailed below.

- **Benefits of Developing Syllabi** — Teachers were asked to select from a list of potential benefits of the syllabus development process. See **Table 6** for the response options from which teachers could select more than one response. The most frequently cited benefit was “collaborating with other teachers in my department”; nearly half of all respondents selected this. One teacher stated “I found it very useful to go through the process and look at our curriculum over four years. The conversations that were had and the decisions that were made by the teachers at each grade level were very valuable.” Indeed, inter- and intra-departmental collaboration on curriculum is a primary goal of the project. Other frequently identified benefits were “aligning my curriculum to standards” and “planning out my course and developing a road map for what my students will do.”
- **Challenges of Developing Syllabi** — Teachers were also asked to select from a list of challenges they may have faced as they developed and submitted syllabi. See

Table 6. *Teacher-Reported Benefits of Creating a Syllabus (n=135)*

Benefit	Response Count	Response %
Aligning my curriculum to standards	51	37.8
Getting an external review of the alignment of my course with the standards I selected	21	15.6
Collaborating with other teachers in my department	65	48.1
Describing my course content	37	27.4
Sharing my course content with my administrator	7	5.2
Planning out my course and developing a road map for what students will do	45	33.3
Developing a syllabus to share with students	19	14.1
Planning which standards will be covered with which courses	32	23.7
Documenting my course content so that it is included in the course pathway analysis	36	26.7
Gaining a better understanding of the Maine Learning Results	23	17.0
Other	14	10.4

Table 7. *Teacher-Reported Challenges of Developing a Syllabus (n=134)*

Challenge	Response Count	Response %
Did not have enough time to work on syllabus development	59	44.0%
Did not know how much detail to include in the syllabus	89	66.4%
Was not sure what I was expected to do	49	36.6%
Did not know where to find resources or answers	32	23.9%
Was not sure which standards to select for some of the units	42	31.3%
Was not sure how to use the scoring guide	46	34.3%
Was not comfortable using the online system	39	29.1%
Was not sure how the process would benefit me or my school	41	30.6%
Other	48	35.8%

Table 7 for the response options; again, teachers could select multiple responses. Two-thirds of all respondents indicated they “did not know how much detail to include in the syllabus,” demonstrating the continued need for exemplar syllabi and professional development. This was the case even for schools that have participated in Maine Course Pathways longer than the other schools. The second most commonly selected response was “did not have enough time to work on syllabus development” (44%; see “Other Challenges” below). Other commonly identified challenges were “was not sure what I was expected to do” (37%) and “was not sure how to use the Scoring Guide” (34%).

■ **Resources** — The survey asked teachers to rate the ease of use of four Maine Course Pathways resources: Scoring Guides, SyllabusMaker, the Maine Course Pathways online system, and the Evidence of Alignment report (review feedback). The response distribution was similar for all four resources: “somewhat” was the modal response for each (48–59%), followed by “not really” (23–31%). We also asked teachers to identify resources they would like to have in the future. Over three-quarters selected “additional examples of confirmed syllabi in my content area.” The second most desired resource was “additional feedback on my syllabus” (47%; see “Other Challenges” below), followed by “additional information about how to align my curriculum to standards.”

■ **Other Challenges** — Throughout the survey, teachers were encouraged to write open-ended responses. Several themes emerged from these responses:

- » Common Core standards — Teachers were concerned that the work they are doing with *Maine’s Learning Results* will have to be redone when the state of Maine and Maine Course Pathways integrate the Common Core standards. The project needs to develop consistent, honest language about what the transition to Common Core will entail for Maine Course Pathways teachers.
- » Software problems — Teachers did not always feel the Maine Course Pathways software was user-friendly. EPIC is planning a user interface upgrade of the SyllabusMaker tool to address

these concerns.

- » Time — Teachers stated their schools did not provide them enough time to develop syllabi. One teacher wrote, “The opportunities I found to discuss this with my department members and colleagues was very valuable...This requires a SIGNIFICANT amount of time ... to do it well; as the State continues to expect documentation of how we are meeting standards and expects us to move to Common Core, time is essential. The State needs to recognize this as well as our local district administration and leadership.” Maine Course Pathways should provide participants with realistic information on the amount of work it takes to be successful in the syllabus development and review process.
- » Training — Teachers mentioned that in-person trainings with EPIC staff were useful. Many teachers stated that they had a much better understanding of the Maine Course Pathways system as a result of the focused teacher work sessions conducted in March 2011. A few said that trainings with syllabus reviewers or content specialists would also be useful. Teachers generally wanted more training on how to create syllabi and align curriculum to standards.
- » Review feedback — Teachers would like to see review feedback that is specific to their syllabi, and helps them understand what evidence to include in which units. Many of them do not feel that the current “confirmed/not confirmed” feedback is sufficient. EPIC has focused on creating a system that is scalable and cost-effective; we have had to balance teachers’ desire for personalized feedback against the cost and time required for reviewers to create, and for EPIC to moderate, tailored written feedback.

- » World Languages standards — Several World Languages teachers stated they have a difficult time including 9–Diploma standards in their syllabi because their students have not had exposure to World Languages prior to 9th grade. To address this concern, EPIC and Maine Department of Education developed lower level World Languages components and Scoring Guides. These will be added to the system in August 2011.



Findings and Recommendations

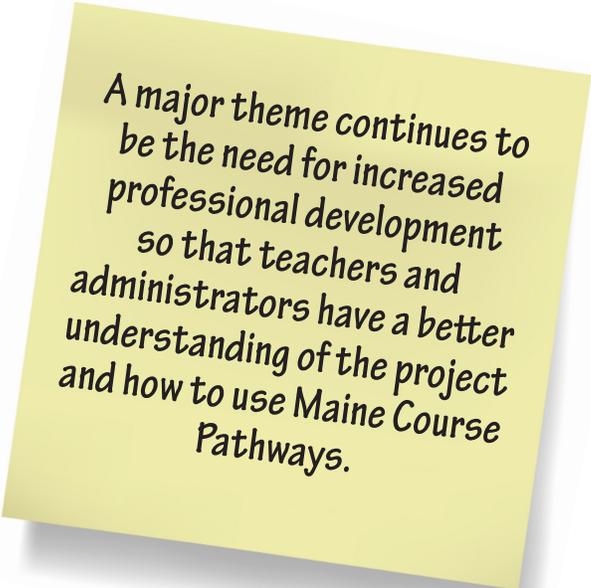
EPIC and the Maine Department of Education have learned several lessons from the Maine Course Pathways project. After three years, there is a deeper understanding of what works and what does not work for teachers, school administrators, and syllabus reviewers.

In previous years, the characteristics of Maine Course Pathways implementation have varied from school to school. A vital component to the success of Maine Course Pathways is school administrators' clear, coherent vision of why and how the project will be implemented at their schools. Once administrators have developed this vision, they must communicate it to teachers so that faculty can share the same understanding.

In addition, a major theme continues to be the need for increased professional development so that teachers and administrators have a better understanding of the project and how to use Maine Course Pathways. Enhancements to and development of additional resources and support is another important area.

Recommendations for the next phase of the Maine Course Pathways project include the following:

- **Increase Project Participation** – Raise awareness about the Maine Course Pathways project and expand recruitment. With existing schools, expand participation by encouraging additional syllabus development and review as well as CTE and multiple content area submissions. As participation increases, it will be important to make sure administrators and teachers are aware of the level of commitment the project demands.



A major theme continues to be the need for increased professional development so that teachers and administrators have a better understanding of the project and how to use Maine Course Pathways.

- **Integrate Maine Course Pathways with new Common Core State Standards** — With Maine's adoption of the Common Core State Standards, the project will transition to these standards for ELA/literacy and mathematics. This will necessitate developing Common Core Scoring Guides. After the Maine Department of Education introduces and trains teachers on standards, EPIC can train on use of the standards in the Maine Course Pathways system.
- **Continue Professional Development** — Training should focus on helping teachers create high-quality syllabi and align curriculum to standards, with an eye towards making professional development cost-efficient and scalable.

- **Expand Teacher Resources** – Expand teacher resource material and include more syllabus examples in all content areas. Additional and higher-quality syllabus exemplars will be helpful. EPIC also plans to include additional on-demand training videos and guides that teachers can access in the system on demand.
- **Continue Maine Course Pathways System Enhancements** – EPIC is planning a user interface upgrade of the SyllabusMaker tool. This new system enhancement should improve user-friendliness of the Maine Course Pathways system.

Conclusion

As the Maine Course Pathways project expands to include more schools and teachers, it is growing beyond its original objective of validating opportunity to learn to become a comprehensive

instructional management tool that provides curriculum, instruction, and assessment data and resources not previously available. Maine Course Pathways continues to create professional development opportunities for teachers and administrators and to increase discussion and collaboration around curriculum development and alignment to state standards.

Leveraging the enthusiasm of current participants and increasing school participation will result in significant growth of the Maine Course Pathways project. Continued expansion of the project will assist the Maine Department of Education in improving the alignment of academic offerings and the opportunity for all students to learn the knowledge and skills they need to be prepared for college and career success.



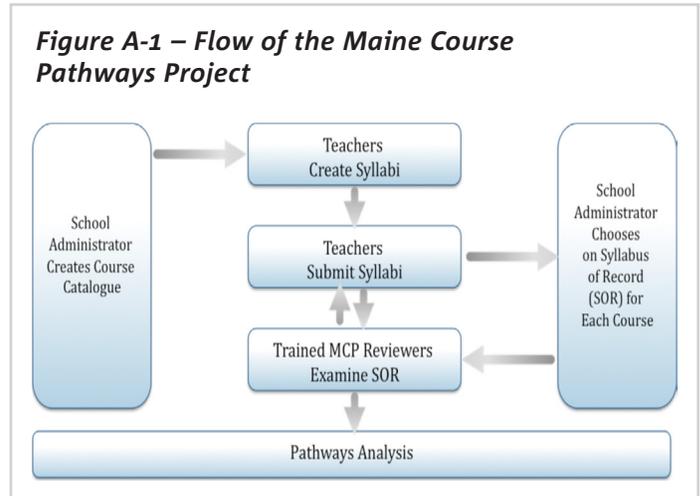
Appendix A

Project Background and System Design

The Maine Course Pathways (MCP) project began in 2007 when the Maine Department of Education (Maine DOE) partnered with the Educational Policy Improvement Center (EPIC) to create a comprehensive system of course development, curricular validation, and pathways analysis to be offered to all Maine high schools. The MCP system was conceptualized based upon the expertise EPIC gained in conducting the AP[®] Course Audit for the College Board. The AP Course Audit is a system in which external reviewers use course syllabi to validate the presence of the AP curricular requirements in every AP classroom worldwide. Over time, the MCP system diverged from AP Course Audit processes as it was refined to meet the specific needs and goals of Maine. The resulting system allows MCP flexibility to support Maine’s standards-based education efforts, serving as a tool for high schools to integrate the national Common Core Standards and common assessments into curriculum, and to implement the Re-inventing School Coalition (RISC) model in high school courses. **Figure A-1** illustrates the current MCP process for individual schools participating in the project.

The school administrator begins the process by entering or uploading the school’s course catalog into the MCP system. After the school has a course catalog in the system, teachers create and submit syllabi for these courses. Teachers of the same course are encouraged to collaborate to create a single syllabus for the course. If more than one teacher submits a syllabus for the same course, the school administrator must select one of these syllabi as the *syllabus of record* (SOR), or the one syllabus per course that will be reviewed.

After the syllabi have been submitted and the



SORs selected, trained content area experts review the syllabi for evidence of the Maine *Learning Results* (MLR) teachers included in the syllabi. If the reviewers do not find sufficient evidence of opportunity to learn one or more MLR scoring components, the syllabus is returned to the teacher for revision. Finally, all courses and their confirmed MLR are included in the Pathways system, which demonstrates the extent to which combinations of courses provide opportunity to learn the MLR in a given content area.

MCP evaluates opportunity to learn in seven of the eight MLR content areas: English Language Arts, Health Education and Physical Education, Mathematics, Science and Technology, Social Studies, Visual and Performing Arts, and World Languages. EPIC and the Maine DOE plan to pilot the review of Career and Education Development standards during the 2011–2012 academic year.

Innovative Elements

The MCP system contains several features to support Maine's standards-based education efforts. This section describes four unique elements of MCP: providing a system that ensures all students the opportunity to learn all required standards; increasing the alignment between high school and college; enabling high school faculty to create high quality syllabi; and advancing the use of technology to improve curriculum and instruction.

Opportunity To Learn

One of the key tenets of the standards movement and the MCP system is that all students can succeed if they are given appropriate opportunities to learn. The "opportunity to learn" approach focuses on the *scope* of the curriculum and instruction that is available to students, and verifies the opportunities schools provide students to meet the standards. Federal educational policy reinforced this principle under the No Child Left Behind Act of 2001 (NCLB). One purpose of NCLB is to "ensure that all children have the opportunity to obtain a high-quality education and reach proficiency on challenging state academic standards and assessments".¹ Opportunity to learn is defined as offering students multiple opportunities and resources that promote learning through multiple forms of instruction, curriculum materials, and nontraditional educational experiences.² The objective of the MCP system is to determine the extent to which combinations of courses from each content area provide a student opportunity to learn all of the MLR.

¹U.S. Department of Education, Office of the Under Secretary. (2002). *No child left behind: A desktop reference*. Washington, D.C., Education Publications Center.

²Cooper, R., and Liou, D. D. (2007). The structure and culture of information pathways: Rethinking opportunity to learn in urban high schools during ninth grade transition. *High School Journal* (October/November 2007), 91, 1, 43–56.
Herman, J. L., and Klein D. (1997). Assessing opportunity to learn: A California example. *CSE Technical Report 453*. Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing (CREST).

College Readiness Strategies

In addition to curricular development and validation, MCP addresses multiple college readiness strategies. Studies conducted by researchers at EPIC found that many college freshmen recognize a gap between the expectations of their high school teachers and the expectations they encounter in college.³ Conley has offered four major strategies to minimize the mismatch between high school curriculum and college course expectations:

1. Align high school curriculum and instruction with college expectations
2. Develop high-quality syllabi in all high school courses
3. Implement seminars for high school seniors
4. Add missing content to high school courses.⁴

With the MCP system, the Maine DOE is focusing on three of the four strategies to increase college readiness: aligning high school curriculum, developing high-quality syllabi, and analyzing course pathways for missing standards.

High Quality Syllabi

The syllabus is a useful tool for determining whether all Maine high school students are being offered the opportunity to learn all the MLR. Properly constructed, a syllabus can explicitly define the expectations in a course and describe the knowledge and skills taught. By looking at the state standards identified in each syllabus, EPIC can validate that all standards are addressed in the curriculum, and determine whether or not the course content is aligned with the standards both horizontally (i.e., within the same grade level) and vertically (i.e., across grade levels). The MCP system encourages the development of high-quality syllabi similar to postsecondary syllabi in content and format, further preparing students

³Conley, D. T., Aspengren, K., Stout, O., and Veach, D. (2006). *College Board Advanced Placement Best Practices Course Study report*. Eugene, OR: Educational Policy Improvement Center.

⁴Conley, D. T. (2007). *Redefining College Readiness*. Volume 4. Eugene, OR: Educational Policy Improvement Center.

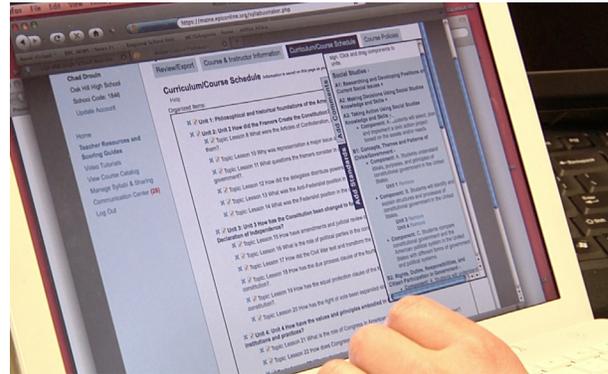
for the college experience. Syllabi allow high schools to explicitly communicate curriculum to parents and students, and provide a document that clearly outlines the actions and behaviors required to succeed in each course. In addition, educators can post syllabi directly online. This increases the transparency of expectations for administrators, teachers, parents, community members, and students.

Typically, school districts have not required high school teachers to follow a prescribed format or use a template when creating a course syllabus. This lack of continuity can contribute to widely diverse course documentation. If they do create them, some teachers tend to view their syllabi and course materials as their own private property, and hesitate to share them with others.⁵ Working together on a common syllabus for each course gives teachers, school administrators and curriculum coordinators the opportunity to improve curricular alignment. A move to encourage Maine teachers to submit course syllabi, in a common format and with the goal of making all syllabi available online or otherwise publicly available, can therefore be the start of cohesive curriculum.

High schools can benefit from creating high quality course syllabi and validating these syllabi through a review process. A school-wide syllabus review process allows teachers to receive non-prescriptive external feedback from experts in their fields. This process ensures that all syllabi are up to date, fosters more opportunities for teachers to collaborate, and can serve as a mechanism to determine whether the curriculum aligns with college expectations.⁶

The Role Of Technology

The MCP system uses technology to connect teachers and administrators, guide them in creating high-quality curriculum aligned with the



Maine Course Pathways online system

MLR, and analyze the results of course offerings. Technology can facilitate a process that formerly required tedious, time-consuming tracking by teachers and administrators. The effects of small changes in a program of study or a course offering can be analyzed almost instantly with software, removing uncertainty and barriers to curriculum change.

The use of technology is therefore central to the MCP system. Every step of the process relies on web-based technology to create, manage, and carry documentation from one stage to the next. To achieve this, MCP utilizes three online systems:

- SyllabusMaker
- Syllabus Review System
- Course Pathways System

EPIC's SyllabusMaker software is the primary tool administrators and teachers use to catalog, create, and share course syllabi. With SyllabusMaker, the online catalog of teachers' syllabi can be easily shared and accessed from year to year. It streamlines syllabus development, provides new teachers access to previous years' documents, and allows for collaborative course development. Administrators have reading privileges to all course syllabi, drawing the administrator into the course creation process and facilitating dialogue between teacher and administrator.

The Syllabus Review System helps content

⁵Conley, D. T. (2005). *College Knowledge: What it really takes for students to succeed and what we can do to get them ready*. San Francisco: Jossey-Bass.

⁶Conley, D. T. (2007). *Redefining College Readiness*. Volume 4. Eugene, OR: Educational Policy Improvement Center.

experts verify whether or not a course provides opportunity for students to learn the standards the teacher identified. The review system utilizes software and methodology developed by EPIC to evaluate syllabi and provides a unique approach for validating course content. A panel of trained content area experts uses criteria developed in collaboration with the Maine DOE content area specialists to confirm that each syllabus contains sufficient evidence of opportunity to learn the MLR. These criteria are described and outlined in a *Scoring Guide* that is readily available to all participants. If reviewers determine a syllabus lacks sufficient evidence of the MLR, teachers have multiple opportunities to adjust or refine the syllabus as needed.

After syllabi are reviewed, the Course Pathways system identifies gaps in MLR coverage across selected course pathways. The online system creates a database of course-standards alignment and analyzes the opportunities to learn offered by courses in combination. These course combinations create multiple pathways toward graduation. Together with the collaborative development and sharing of course syllabi, this newly developed software allows administrators, teachers, and students to understand how combinations of courses build on the knowledge and skills of each course to provide full pathways to graduation.

Syllabus Of Record

Although multiple teachers at a high school or CTE center may teach the same course, opportunities to learn the standards should be consistent across all teachers' courses. Therefore, the school administrator identifies one syllabus per course as the *Syllabus of Record (SOR)*. The SOR is the official syllabus for the course in the MCP system, and is

the syllabus document evaluated in the review process.

The format and structure of the SOR are similar to those of standard course syllabi. Common elements of the SOR include course objectives, course policies, and unit-by-unit curriculum. While individual teachers may use their own instructional strategies, the SOR includes the common standards, activities, assignments, and assessments for a course. In this way, the SOR represents the *minimum* standards and activities that a student can expect to encounter in that course. When creating the SOR, teachers align standards with each unit of the syllabus based on what is taught in that unit.

Figure A-2 shows how standards are selected for curricular units. In SyllabusMaker, the teacher drags the applicable standards to each curricular unit. The standards for each unit display in the syllabus document and in the syllabus review system for evaluation.

Figure A-2. Teacher adding standards to units in SyllabusMaker

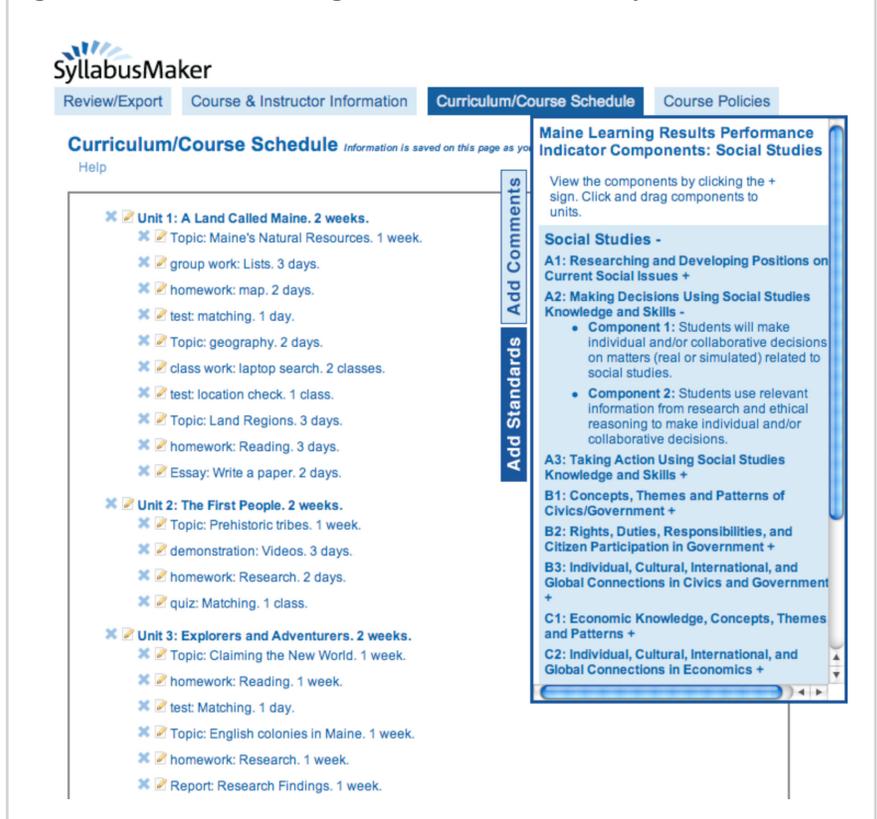


Figure A-3. School administrator selecting a syllabus of record

Submitted Syllabi: World History 1

Below are the syllabi your teachers have submitted for World History 1. Your task is to verify one syllabus as the syllabus of record for the course. The syllabus of record will be reviewed by trained content experts for the Maine Learning Results the teacher has identified. A syllabus you've returned to a teacher for edits will not appear here until the teacher resubmits it.

• If your teachers worked together to create and submit one syllabus, please select it and click "Submit decision."

• If more than one teacher has created and submitted a syllabus, please view the syllabi and the MLRs to make your decision. Remember that all teachers of a course must attest to teaching the MLRs the reviewers confirm in the syllabus of record.

Teacher	View Syllabus	View MLR Report	Select as Syllabus of Record
Jones, Jack	World History 1	View MLRs	<input type="radio"/>
Smith, Jane	World History 1	View MLRs	<input type="radio"/>

Teachers are allowed to submit one syllabus for every course they teach. However, teachers of the same course are strongly encouraged to collaborate to develop the SOR for that course. Once syllabi are created, teachers submit them to the school administrator, who identifies one SOR for each course to be reviewed. **Figure A-3** shows the school administrator selecting a SOR. In selecting the SOR, the administrator has a record of the syllabus and the standards each teacher has listed for the course.

Scoring Guides

The MCP Scoring Guides, developed collaboratively by syllabus reviewers and the Maine DOE content area specialists, contain the criteria and guidelines reviewers use to determine whether a unit contains sufficient evidence of the MLR scoring components indicated by the teacher.

Maine organizes each content area's MLR by standards that outline the broad knowledge and skills students should acquire. The standards are broken into *performance indicators (PIs)* that

define the big ideas in each standard. In order to align and review the MLR at the curricular unit level, MCP breaks PIs down into *scoring components*. The scoring components are concise measures of individual learning targets that can be taught and evidenced in a single course. As teachers create syllabi, they align scoring components to each curricular unit.

Figure A-4 shows the Scoring Guide for an English Language Arts component. Although

Scoring Guides are developed and modified for each content area specifically, all Scoring Guides follow a uniform structure and contain the following information:

- *Performance Indicators*: Referenced directly from the 2007 MLR.
- *Scoring Components*: A break down of the performance indicators to a level that can be taught and evidenced in a single course.

Figure A-4. Scoring Guide for an English Language Arts component

C. RESEARCH	
C1. Research	
MLR Performance Indicator: Students develop research questions and modify them as necessary to elicit, present, and critique evidence from a variety of primary and secondary sources following the conventions of documentation.	
Component: Students engage in the process of inquiry by gathering, critiquing, and synthesizing evidence.	
Key Term & Definition(s):	process of inquiry: A broad category involving the idea of accessing, gathering, and processing information.
Decision Rule(s):	The syllabus must show evidence that students have opportunities to engage in the process of inquiry.
Important Consideration(s):	The process of inquiry may be as informal as a classroom discussion, or as formal as library research. This standard focuses on the process of research and not on the presentation of those findings.
	The emphasis of this Performance Indicator is about the process of inquiry, not creating research projects.
	The process of inquiry may involve traditional research methods, personal interview, viewing a video, watching presidential debates, or other media sources.
	The process of inquiry can be entirely verbal; it does not have to involve formal assignments.
	For this component, critiquing evidence means evaluating evidence and making decisions about usefulness.

- **Key Terms:** Particular words and phrases in the scoring components defined to ensure consistent understanding among teachers and reviewers.
- **Decision Rules:** Description of the information that must be present in the syllabus for reviewers to confirm the scoring component.
- **Important Considerations:** Additional information to provide context for the decision rules and guide reviewers' decision-making. This may include additional subject-specific context that may not appear in the performance indicator or component.

Teachers and administrators have access to the Scoring Guides for all seven content areas in the online system. Teachers are encouraged to use these documents while developing their syllabi to ensure their units contain enough detail to confirm opportunity to learn.

Content Area Reviews

A *Content Area Review* is a review of an SOR in one content area. Although most teachers align SORs with components from a primary MLR content area, they have the option to select components from more than one content area. Syllabi that include scoring components from *multiple content areas* undergo review in each content area from which components are selected. For example, if a chemistry syllabus contains MLR scoring components from Science and Technology, as well as Mathematics, the syllabus will undergo two content area reviews: one in Science and Technology, and one in Mathematics.

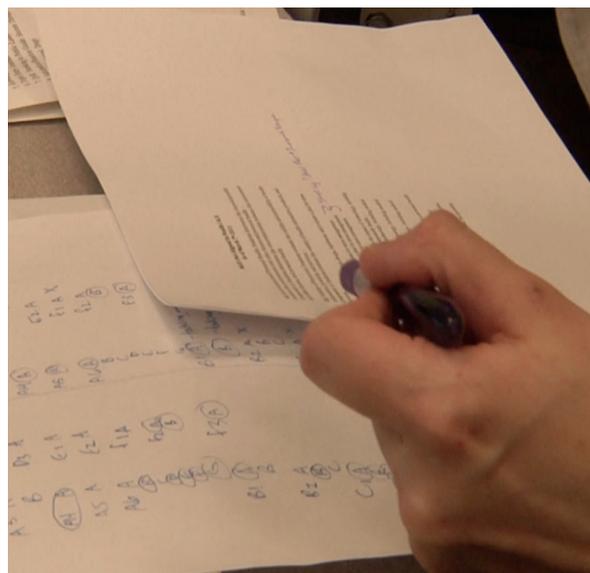
Reviewers

Syllabus reviewers, contracted by EPIC, are content area experts from outside the state of Maine. These reviewers bring to the MCP system considerable teaching experience, either as current postsecondary faculty or as retired high school faculty. All reviewers have prior experience with syllabus scoring guides from prior years of

MCP or from the AP Course Audit.

There are two types of syllabus reviewers: reviewers and senior reviewers. The main distinguishing factor between the two groups is experience; senior reviewers have more experience with the syllabus review process and have assisted with the development of the Scoring Guide. There are two reviewers and one senior reviewer in each content area.

All syllabus reviewers complete an EPIC-designed program prior to reviewing SORs for MCP. The program consists of independent practice reviews followed by facilitated team discussion of review results and implementation of the Scoring Guide. Senior reviewers provide guidance to other reviewers throughout the review process. This process hones reviewer judgment and improves inter-rater reliability.



Teacher cross-referencing standards

Review Process

The review process begins with two reviewers who independently evaluate each SOR in their content area. Reviewers begin each evaluation by reading the full SOR to establish context for the course. Next, the reviewer works through the syllabus one scoring component at a time to provide a decision. **Figure A-5** shows a reviewer evaluating an English/language arts syllabus. Note that the reviewer sees the Scoring Guide onscreen while evaluating each component.

Assumptions For Syllabus Reviews

The MCP review process is based upon a basic set of assumptions. Reviewers use the following assumptions and principles to guide the SOR review process:

1. Components are the smallest grain size of the MLR. Therefore, components **cannot** be partially met in a course.
2. Performance indicators comprise multiple components and **can** be partially met in a course. Any number of a PI's components can be aligned to a single unit.

Figure A-5. Syllabus Review System

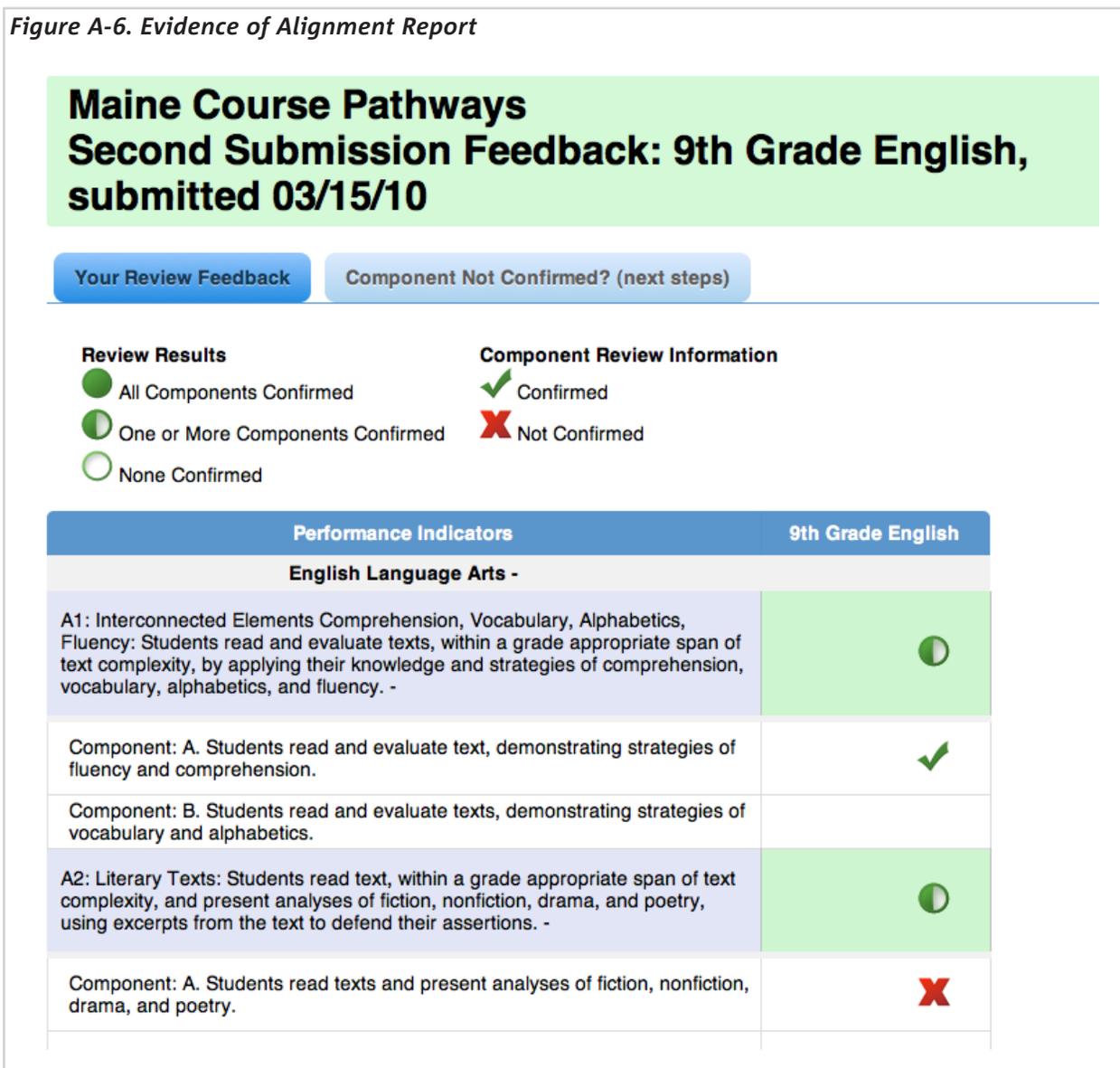
Standard A. READING	
<input type="button" value="Submit Review"/> <input type="button" value="Save and Quit"/> << >>	
A1: Interconnected Elements Comprehension, Vocabulary, Alphabetics, Fluency: Students read and evaluate texts, within a grade appropriate span of text complexity, by applying their knowledge and strategies of comprehension, vocabulary, alphabetics, and fluency. -	From evidence in this syllabus, can you confirm that this component is taught in the course?
Component: A. Students read and evaluate text, demonstrating strategies of fluency and comprehension. -	<input type="radio"/> Confirmed <input type="radio"/> Not Confirmed
Unit(s): Unit 1: Magazine Unit	
Decision Rule(s): 1. The syllabus must show evidence of assessment of fluency as associated with rate and accuracy.	
Important Consideration(s): Assessment does not need to be an essay to satisfy the component. Fluency and comprehension are paired in this scoring guide as this is most appropriate at the secondary level. Fluency should not be exclusive to reading aloud. Responses to reading can take many forms, and need not be formal papers; responses can also show evidence of graded classroom discussion. Fluency and comprehension will often be demonstrated in a reading assessment that requires the student to read and answer questions without discussion.	

The role of the MCP reviewer is to confirm the existence of components within a unit; it does not involve curriculum evaluation or professional development in curriculum design. Therefore, syllabus reviewers do not provide suggestions for additional components that may be covered in the course.

Review Outcomes

Once an SOR has been reviewed in all applicable content areas, the results of the review are sent electronically to the teacher and administrator in the form of an *Evidence of Alignment Report* (Figure A-6). The final decisions are also sent to the Pathways tool.

Figure A-6. Evidence of Alignment Report



Pathways

In the Pathways tool, administrators analyze combinations of courses in each content area to:

- verify that multiple combinations of courses offer the opportunity to learn all MLR in a content area;
- identify unconventional course pathways that allow students opportunity to learn all the MLR; and
- identify any coverage gaps in the MLR.

Figure A-7 shows the school administrator selecting courses for a pathway. The boxes in gray are courses in the school's catalog in the Science and Technology content area. The administrator drags and drops the courses into the grid below.

Figure A-7. School administrator entering a course pathway

Create Pathways

This system uses syllabi reviewed in Maine Course Pathways to tell you whether combinations of courses you identify provide the opportunity to learn all of Maine's *Learning Results*.

To begin, please select a content area:

Science and Technology [Instructions](#)

Science And Technology

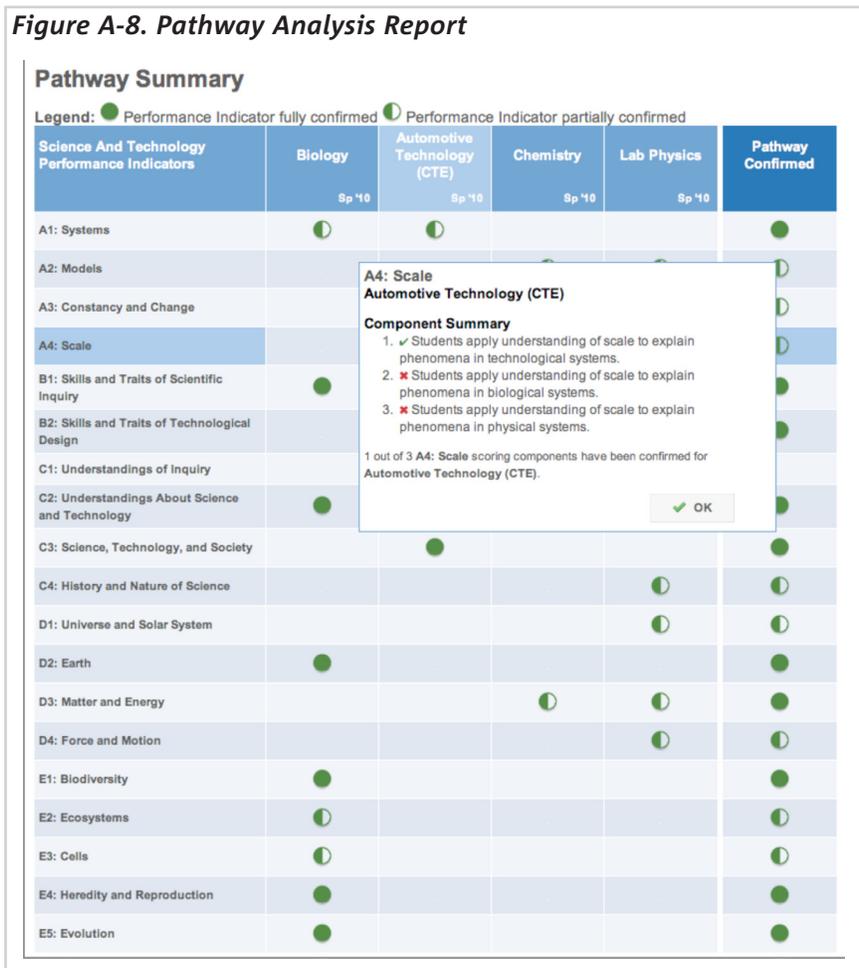
The date listed for each course refers to the quarter the syllabus was last reviewed.

Astronomy Sp '10	Automotive Technology (CTE) Sp '10	Biology Sp '10	Building Construction (CTE) Sp '10	Chemistry Sp '10
Chemistry In The Community Sp '10	Drafting Sp '10	Lab Physics Sp '10		

Year 1	Year 2	Year 3	Year 4	Year 5

[Save Pathway](#) [Evaluate](#) [Cancel](#)

A pathway may consist of multiple courses per year, or only one or two courses. After the administrator has assembled a pathway and clicked the “Evaluate” button, the system analyzes the pathway and tells whether the pathway does or does not provide opportunity to learn all the standards in the content area, based on the evidence teachers included in the syllabi. The pathway analysis report as demonstrated in **Figure A-8** shows which performance indicators were confirmed in the pathway, based on the evidence teachers included in the syllabi. Users can drill down to information at the scoring component level.



Appendix B

Participation by Content Area and School

Table B-1. English Language Arts Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	3	14	15
Gray-New Gloucester High School	13	14	16
Hodgdon High School	3	4	4
Messalonskee High School	2	1	1
Oak Hill High School	0	1	5
Sanford High School	5	0	2
CTE Centers			
Mid-Coast School of Technology	3	0	1
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	1	3
Total	29	35	47

Table B-2. Health Education & Physical Education Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	2	6	8
Gray-New Gloucester High School	3	5	5
Hodgdon High School	2	1	1
Messalonskee High School	0	0	0
Oak Hill High School	1	5	6
Sanford High School	6	0	0
CTE Centers			
Mid-Coast School of Technology	0	0	1
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	0	2
Total	14	17	23

Table B-3. Mathematics Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	4	12	15
Gray-New Gloucester High School	9	10	12
Hodgdon High School	3	1	1
Messalonskee High School	1	1	1
Oak Hill High School	3	7	7
Sanford High School	2	1	1
CTE Centers			
Mid-Coast School of Technology	2	2	4
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	0	2
Total	24	34	43

Table B-4. Science & Technology Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	5	12	14
Gray-New Gloucester High School	9	5	6
Hodgdon High School	3	5	8
Messalonskee High School	2	1	1
Oak Hill High School	2	6	6
Sanford High School	12	1	1
CTE Centers			
Mid-Coast School of Technology	3	0	1
Sanford Regional Technical Center	1	1	1
Tri-County Technical Center	0	0	1
Total	37	31	39

Table B-5. Social Studies Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	3	15	16
Gray-New Gloucester High School	4	5	6
Hodgdon High School	3	2	2
Messalonskee High School	2	1	1
Oak Hill High School	1	7	13
Sanford High School	10	1	3
CTE Centers			
Mid-Coast School of Technology	0	0	0
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	0	0
Total	23	31	41

Table B-6. Visual & Performing Arts Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	5	5	5
Gray-New Gloucester High School	4	15	16
Hodgdon High School	0	0	0
Messalonskee High School	0	0	0
Oak Hill High School	1	12	16
Sanford High School	6	1	1
CTE Centers			
Mid-Coast School of Technology	0	0	0
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	0	0
Total	16	33	38

Table B-7. World Languages Participation by School

School	Teacher Accounts	Syllabi of Record	Content Area Reviews
High Schools			
Belfast Area High School	3	3	3
Gray-New Gloucester High School	4	12	12
Hodgdon High School	0	0	0
Messalonskee High School	0	0	0
Oak Hill High School	2	6	6
Sanford High School	5	2	2
CTE Centers			
Mid-Coast School of Technology	0	0	0
Sanford Regional Technical Center	0	0	0
Tri-County Technical Center	0	0	0
Total	14	23	23

