



MASSACHUSETTS Department of Higher Education

Massachusetts Department of Higher Education OER Assessment KPIs Implementation Guide

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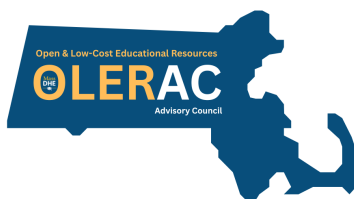


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Purpose of this Guide

The purpose of this document is to provide guidance to the public higher education institutions in the state of Massachusetts on suggested practices for collecting data and reporting progress to key stakeholders at their institution and to the Massachusetts Department of Higher Education (DHE) on Open Educational Resources used at each institution.

This guide is intended for those individuals who will be gathering and reporting OER usage to their institutional constituents and the Massachusetts Board of Higher Education. This group may include the MA OER Advisory Council representative, assessment and institutional research officers and personnel, librarians or instructional design staff who may have assessment responsibilities related to OER, and OER champions.

The document addresses each of the Key Performance Indicators developed by the MA State OER Advisory Council and approved by the Massachusetts Board of Higher Education.

In addition to this document, readers may also want to consult the [OER Course Marking Implementation Guide](#), which was developed in June 2021 and updated in June 2024 by the Course Flagging Committee of the Massachusetts OER Advisory Council.

For more information please see [Appendix A: Letter \(7/27/2021\)](#) from Dr. Carlos E. Santiago, Commissioner of Higher Education, regarding OER Course Marking Implementation and OER Key Performance Indicators.

The Massachusetts OER Advisory Council voted on 3/21/22 to recommend the use of this document in OER data collection.

Thank you to all the members of the Massachusetts OER Advisory Council who provided valuable feedback and pragmatic changes, with special thanks to Donna Mellen, Marilyn Billings and Robert Awkward.

Definitions

ABC Grade - An ABC grade is the number of enrollments who received a grade ranging from A through C- in a course section. If a grade is Pass/Fail, a pass grade should be counted as an ABC grade. Courses that are audited should not be included in grade submissions.

Average Cost Per Textbook = [\\$117](#) (SPARC, 2018)

Course Section - An individual undergraduate course offering distinguished from other offerings by date, time, location, instructor, and delivery mode.

Include credited undergraduate course sections. Include early college, directed studies, labs, developmental course sections and art, studio, and PE courses sections which may not typically have required textbooks.

Exclude credited course sections like independent studies, dissertations, practicums, internships, and externships. Exclude **all** non-credited courses sections and workforce development offerings.

Example: ENGL 100 Writing I = Course

20 ENGL 1100 Writing I courses offered in Fall semester = 20 sections

1 course 20 sections

DFW Grade- A “DFW” grade is the number of student enrollments who received a grade that was a D+ or lower or withdrew from the course section. If a grade is Pass/Fail, a fail grade should be counted as an DFW grade. Courses that are audited should not be included in grade submissions.

Enrollments - the duplicated count of students enrolled in course sections

Low Cost Course Materials - Those course sections that have required course materials that cost \$50 or less in total. See Definition of OER (below) and the materials included in that definition.

No Cost Course Materials - Those course sections that have \$0 materials cost for required course materials See Definition of OER (below) and the materials included in that definition.

No/Low Course Materials- Those course sections that are identified as having No Cost (\$) AND those course sections identified as Low Cost (<\$50).

OER - The term Open Educational Resources (OER) has a very specific meaning. The Board of Higher Education adopted this definition of OER on October 22, 2019:

Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions Source: Open Educational Resources. Retrieved June 18, 2019, from [United Nations Educational, Scientific, and Cultural Organization](#)

For purposes of collecting data in alignment with the [state's OER Course Marking Implementation Guide](#) (page 8), instructional materials that may be considered No/Low Materials are:

- OER: Open Educational Resources are instructional materials released openly (Creative Commons licenses) or in the public domain.
- No Cost: Instructional materials are provided to students at no cost. No cost instructional materials are funded by grants, institutional funding models, or a compilation of materials that are not traditional OER.
- Library Resources: A high percentage of simultaneous user resources that is readily available for the number of students enrolled including eBooks, digital journal articles, streaming films, etc. This percentage is determined by the institution and should ensure that students are not without resources.

Professional Development - Includes faculty and staff workshops, communities of practice, information sessions or other activities in which OER is a topic.

Reporting Year - July 1 - June 30. Academic reporting year is as follows: Summer 2, Fall, Winter, Spring, Summer 1.

Example: For AY2023 (July 1, 2022 - June 30, 2023). If a course begins in one reporting year and ends in another, include it in the year the course began. (ex. Summer I course runs May 25, 2023 - July 4, 2023 then the course is reported in AY2023, not AY2024.

Section - see Course Section definition.

Students - undergraduate students, whether enrolled in day, evening, online or in-person

Students in Key Demographic Groups - Race, Ethnicity, Gender and Pell Grant recipients data will be collected (see KPI 5).

Traditional Course Material Cost - Those course sections that have required course materials that cost more than \$50 in total. See Definition of OER and the materials included in that definition.

Unknown Course Material Cost - Those course sections where the cost of required course materials cannot be determined or is unknown. See Definition of OER and the materials included in that definition.

Key Performance Indicators

The OER Key Performance Indicators approved by the Massachusetts Board of Higher Education align with the [COUP Framework](#) which was the original assessment framework developed by the Open Education Group. The Framework allows for OER to be assessed through four complementary frames:

1. **Cost** that can be used to evaluate the financial and cost savings associated with the use of OER.
2. **Outcomes** that can be used to evaluate the impact and effectiveness of OER on student learning and success.
3. **Usage** that can be used to evaluate the ways in which faculty and students interact with OER.
4. **Perceptions** that can be used to evaluate faculty and students' views and feelings about OER.

Important Notes on Data Collection

When submitting your OER assessment data to the state please consider the following:

1. If you have no data to report for all of the KPIs, please login, check the "No Data to Report" box and click on submit.
2. If you have no data to report for a specific KPI, enter 0 in the box provided.
3. If your institution does not distinguish between No Cost (\$0) and Low Cost (<\$50) course sections, report all of the data in the low cost category. Enter 0 in the No Cost category. This applies to KPI 1, 2, 3, and 5.
4. Ensure that traditional and unknown costs are reported separately. See glossary on page 5 for definitions.
5. Prior to submitting your data, please compare your data to what was submitted the previous year for reasonableness. Please account for any significant discrepancies.
6. If you are using bookstore data from eCampus, use the following notes from the eCampus textbooks spreadsheet to assign cost categories:
 - a. No Cost Category
 - i. There is no textbook required for this course.
 - ii. Open Educational Resources and/or library content required for this course.
 - iii. Recommended course materials (per course marking guide).
 - b. Low Cost category (i.e. under \$50)
 - i. Course materials that are under \$50. This includes digital, used, and rental books.
 - c. Unknown course materials costs (the cost of course materials for a section cannot be confirmed).
 - i. Textbooks are still being determined for this course. Please check back.

- ii. Course sections that are on the list provided by your Institutional Research Office but are not on the bookstore store list.
- d. Traditional Cost course sections (i.e. over \$50)
 - i. Course materials that cost more than \$50.

See page 21 for more information about using bookstore data.

Calculating and Communicating the KPIs

NOTE: The DHE will report data in the aggregate - either for all institutions or by segment (i.e. community colleges, state universities, and UMass system). Individual data by institution will not be publicly reported by DHE.

KPI 1A: Total Cost Savings for Students

Special Note for KPI 1:

For this metric, each institution does not need to report their cost savings. The DHE will use the student data reported in KPI 3 and calculate cost savings based on the SPARC \$117 average book cost.

Each institution is able to use the textbook cost pricing of their choice (\$117, \$100, actual book cost, etc.) for internal reporting purposes.

Listed below are the steps the DHE will use to calculate total cost savings.

DHE Step 1: Calculate cost savings of No Cost (\$0) materials using average textbook costs.

Information Needed:

1. Average textbook cost is \$117 ([SPARC average](#))
2. Number of course sections with No Cost course materials (See KPI 2 for details)
3. Enrollments in those course sections (See KPI 3 for details)

Formula: Cost savings = National average costs of textbooks multiplied by the enrollments in No Cost course sections

Scenario: 2,025 enrollments in No Cost course sections (\$0)

Example: \$117 x 2,025 enrollments = **\$236,925**

DHE Step 2: Calculate cost savings of Low Cost course materials using average textbook cost and Low Cost item (\$50)

Note: Even if an institution has specific Low Cost pricing for each section, use the \$50 average for purposes of reporting to the state.

Information Needed:

1. Average textbook cost is \$117 (SPARC average)
2. Low Cost textbook price is \$50
3. Number of course sections with Low Cost course materials
4. Enrollments in those course sections

Formula: (National average textbook price (\$117) - average Low Cost material price (\$50)) multiplied by the enrollments in Low Cost course sections

Scenario: 2,295 enrollments in Low Cost course sections

Example:

$\$117 - \$50 = \$67$ in textbook savings

$\$67 \times 2,295 \text{ enrollments} = \text{\$153,765}$

DHE Step 3: Calculate TOTAL cost savings using the cost savings of No Cost course materials and the cost savings of Low Cost course materials

Information Needed:

1. Cost savings of No Cost course materials
2. Cost savings of Low Cost course materials

Formula: Total cost savings = Cost savings of No Cost course materials + Cost savings of Low Cost course materials

Example: $\$236,925 + \$153,765 = \$390,690$ (using the dollar amounts from 1 and 2 above)

DATA TO REPORT TO THE STATE

- KPI 1A.1: Number of enrollments in No Cost course sections (\$0) (See KPI 3 for details)
- KPI 1A.2: Number of enrollments in Low Cost course sections (\$<50) (See KPI 3 for details)

KPI 1B: Institutional Investments in Open Education

Special Note for KPI 1B:

For this metric, each institution does not need to calculate the return on investment (ROI). The DHE will use the cost savings they calculate in KPI 1A and the fund expenditures provided in this metric to calculate ROI.

When reporting the dollar values for institutional professional development opportunities and grant programs, include only monies paid by your institution towards these activities. If faculty are paid a stipend from another source like the Department of Higher Education, ROTEL, or CA-ROTEL do not include. This financial figure is provided by the organization separately.

To identify these values, please consult with the OER representative on your campus. A list of representatives can be found on the [OER Advisory Council page under Members](#).

Listed below are the steps the DHE will use to calculate return on investment. If your institution does not provide stipends or grants for Open Education, please enter \$0.

Information Needed:

1. The total dollar value for stipends paid to individuals attending institutional Open Education professional development opportunities. Do not include monies spent for professional development opportunities offered outside your institution.
2. The total dollar value for stipends paid to faculty who adopt, adapt, or create OERs via an institutional grant program
3. Cost savings calculated in KPI 1A by DHE

Step 1: Calculate Return on Investment for institutional investments in No/Low Course materials.

Formula:

Step 1: $\text{ROI} = (\text{Cost savings for students} - \text{Stipends paid}) / \text{Stipends paid}$

Step 2: Multiply ROI by 100 to get the percentage.

Scenario: Textbook savings from No/ Low Cost course materials total \$390,690. The University spent \$30,000 in grants for faculty to transition from commercial resources to No/ Low Cost course materials and stipends for individuals to attend OER professional development programs.

Example: $\text{ROI} = (\$390,690 - \$30,000) / \$30,000 = 12.023$

12.023 multiplied by 100 = 1,202% Return on Investment

Another way to phrase this is for every \$1 spent on open education investments, \$12.02 in course material savings is realized, and this savings will continue as future sections are taught.

DATA TO REPORT TO THE STATE

- KPI 1B.1: The total dollar value for stipends paid to individuals attending institutional Open Education professional development opportunities. Do not include monies spent for professional development opportunities offered outside your institution.
- KPI 1B.2 The total dollar value for stipends paid to faculty who adopt, adapt, or create OERs via an institutional grant program

KPI 2: No Cost, Low Cost, and Unknown Cost Course Sections

NOTE: Changes to KPI 2 as of July 2024

1. The course section definition now includes directed studies and labs.
2. A new category of “Unknown course material costs” has been added. If a course section cannot be confirmed as No Cost (\$0), Low Cost (\$<50) or Traditional Cost (\$>50), the section should be counted as Unknown Cost (\$?).

Course Sections - An individual undergraduate course offering distinguished from other offerings by date, time, location, instructor, and delivery mode.

Include credited undergraduate course sections. Include early college, directed studies, labs, developmental course sections and art, studio, and PE courses sections, which may not typically have required textbooks.

Exclude credited course sections like independent studies, dissertations, practicums, internships, and externships. Exclude **all** non-credited courses sections and workforce development offerings.

Step 1: No Cost course materials (\$0)

Information Needed:

1. Number of course sections with No Cost course materials
2. Total number of course sections offered

Example: A University offers **1,000 course sections** during an academic year. Of those 1,000 course sections, 75 are identified as No Cost.

- **Formula: Number of No Cost course sections / Total number of ALL course sections offered**
Percentage of course sections using No Cost course materials in relation to total course sections

offered is 7.5% or 75/1000 where 75 is the number of No Cost course sections and 1,000 is the number of total course sections.

Step 2: Low Cost course materials (\$<50)

Information Needed:

1. Number of course sections with Low Cost course materials
2. Total number of course sections offered

Example: A University offers **1,000 course sections** during an academic year. Of those 1,000 course sections, 85 are identified as Low Cost.

- **Formula: Number of Low Cost course sections / Total number of ALL course sections offered**
Percentage of course sections using Low Cost course materials in relation to total course sections offered is 8.5% or 85/1000 where 85 is the number of Low Cost course sections and 1000 is the number of total course sections.

Step 3: Unknown Cost materials (\$?)

Information Needed:

1. Number of course sections with Unknown Cost Materials
2. Total number of course sections offered

Example: A University offers **1,000 course sections** during an academic year. Of those 1,000 course sections, 50 course sections have Unknown course material costs.

- **Formula: Number of Unknown Cost course sections / Total number of ALL course sections offered**
Percentage of course sections using Low Cost course materials in relation to total course sections offered is 5% or 50/1000 where 50 is the number of Unknown course material cost sections and 1000 is the number of total course sections.

DATA TO REPORT TO THE STATE

- KPI 2.1: Number of course sections with No Cost course materials (\$0)
- KPI 2.2: Number of course sections with Low Cost course materials (\$<50)
- KPI 2.3: Number of course sections with Traditional Cost materials (\$>50)
- KPI 2.4: Total number of course sections for which the cost is Unknown (\$?)

KPI 3: Enrollments in No Cost, Low Cost, and Unknown Cost Course Sections

*This KPI counts the total number of enrollments in OER course sections rather than unique students enrolled. One student may be enrolled in multiple OER course sections and is counted for each enrollment. **For purposes of this KPI, do not deduplicate student enrollment.**

Information Needed:

1. Number of No Cost course sections (\$0)
2. Number of enrollments in No Cost course sections
3. Number of Low Cost course sections (\$<50)
4. Number of enrollments in Low Cost course sections
5. Number of Unknown cost course sections (\$?)
6. Number of enrollments in Unknown Cost course sections
7. Total number of **ALL** course sections which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections
8. Total number of **ALL** enrollments in each course section which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections

Process: Calculating enrollments in No Cost course sections (\$0)

Step 1. Identify the number of **course sections** that have **No Cost course materials**. (See KPI 2 - course sections)

- **Scenario:** 75 course course sections use No Cost course materials

Step 2. Tally the number of enrollments in No Cost course sections.

- **Scenario:** 2,025 enrollments in the 75 course course sections

Step 3. Tally the number of enrollments in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?) and Traditional Cost (>\$50) course sections

- **Scenario:** 1,000 course sections were offered. Total enrollments in **ALL** course sections which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections totals 24,000.

Step 4. Calculate the percentage. Number of enrollments in No Cost course sections / Number of enrollments in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?) and Traditional Cost (>\$50) course sections.

- **Scenario:** 2,025/24,000 or 8.4%

Process: Calculating enrollments in Low Cost course sections (\$<50)

Step 1. Identify the number of **course sections** that have **Low Cost course materials**. (See KPI 2)

- **Scenario:** 85 course sections use Low Cost course materials

Step 2. Tally the number of enrollments in Low Cost course sections.

- **Scenario:** 2,295 enrollments in the 85 Low Cost course sections

Step 3. Tally the number of enrollments in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?) and Traditional Cost (>\$50) course sections.

- **Scenario:** 1,000 course sections were offered overall. Total enrollment in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?) and Traditional Cost (>\$50) course sections is 24,000.

Step 4. Calculate the percentage. Number of enrollments in Low Cost course sections / Number of students enrolled in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections.

- **Scenario:** 2,295/24,000 or 9.5%

Process: Calculating enrollments in Unknown Cost course sections (\$?)

Step 1. Identify the number of **course sections** that have **Unknown Cost course materials**. (See KPI 2)

- **Scenario:** 50 course sections have Unknown course material costs

Step 2. Tally the number of enrollments in Unknown Cost course sections

Scenario: 600 enrollments in the 50 Unknown Cost course sections

Step 3. Tally the number of enrollments in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost course sections (>\$50)

- **Scenario:** 1,000 course sections were offered overall. Total enrollment in **ALL** course sections which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost course sections (>\$50) is 24,000.

Step 4. Calculate the percentage. Number of enrollments in Unknown Cost course sections / Number of students enrolled in **ALL** course sections, which is comprised of No Cost (\$0), Low Cost (\$<50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections.

- **Scenario** 600/24,000 or 2.5%

DATA TO REPORT TO THE STATE

- KPI 3.1: Number of enrollments in No Cost course sections (\$0)
- KPI 3.2: Number of enrollments in Low Cost course sections (\$<50)
- KPI 3.3: Number of enrollments in Traditional Cost course sections (>\$50)
- KPI 3.4: Number of enrollments in Unknown Cost course sections (\$?)

KPI 4: Number of Faculty/Staff Participating in Professional Development in OER Training and Education

2025 Clarification Note: Professional development opportunities are opportunities provided by your institution. They do not include workshops or opportunities provided by external organizations. To identify professional development opportunities, please consult with the OER representative on your campus. A list of representatives can be found on the [OER Advisory Council page under Members](#).

Information Needed:

- Number of professional development sessions
- Length of professional development sessions
- Number of faculty/staff at each session

Calculating faculty/staff participation in Open Education professional development programs

Example: The following No/Low professional development opportunities were offered by University A:

Activity	Time Length	Number of Participants
Institutional presentation introducing No/Low resources	1 hour	30
Institutional workshop on evaluating No/Low resources	3 hours	15
Institutional community of practice on open pedagogy	8 hours	10

Formula: Calculate the number of hours faculty/staff spent in No/Low professional development

Activity	Time Length	# of Participants	Total Hours
Presentation introducing faculty/staff to No/Low resources	1 hour	30	30
Workshop on evaluating No/Low resources	3 hours	15	45
Community of practice around open pedagogy	8 hours	10	80
Total:	12	55	155

DATA TO REPORT TO THE STATE

- KPI 4.1: Number of professional development opportunities offered by your institution
- KPI 4.2: Number of professional development opportunities hours offered by your institution
- KPI 4.3: Number of faculty/staff participating in professional development opportunities offered by your institution
- KPI 4.4: Total number of faculty/staff staff hours spent in professional development opportunities offered by your institution

KPI 5: Comparison of Enrollments by Grade Outcomes among No Cost, Low Cost, Unknown Cost, and Traditional Cost Course Sections by Key Demographic Groups

NOTE: As of June 2024, KPI 5 & 6 have been combined so that the number of enrollments with DFW grades by course section types can be compared by key demographics. KPI 5 includes the number of enrollments by course section types with ABC grades (A through C-), DFW grades (grades that are D+ or lower and withdrawals), and Incompletes.

*This KPI counts the total number of enrollments in course sections rather than unique students enrolled. One student may be enrolled in multiple course sections and is counted for each enrollment. **For purposes of this KPI, do not deduplicate student enrollment.**

This change in data collection will allow institutions and the Department of Higher Education to evaluate whether key demographic groups benefit from the use of No/Low course materials

Reporting Requirements: Annually beginning in AY2024

Information Needed:

- Student enrollments in No Cost (\$0), Low Cost (<\$50), Unknown Cost (\$?), and Traditional Cost (>\$50) course sections
- Student enrollment grades categorized as ABC (A through C-), DFW, and incompletes by course section categories
- Race and ethnicity data for students - American Indian/Alaskan Native (AI/AN), Asian or Asian-American (Asian) Black or African-American (Black), Latinx (Latinx), Native Hawaiian/Pacific Islander (NH/PI), Two or more, Unknown, US non-resident, and White by course section and grade categories
- Gender data for students (Female, Male, Another Gender, and Unknown) by course section type and grade categories
- Pell Status for students (Pell eligible, Non-Pell eligible, Unknown Pell eligible) by course section type and grade categories

The tables on the following pages reflect how the data will be submitted through HEIRS.

Table 1. Data Reported by Race and Ethnicity.



Data Check! Student enrollments in the Race and Ethnicity table should equal the number of student enrollments reported in KPI 3

	Enrollments by Race and Ethnicity								
Date to be entered.	AI/AN	Asian	Black	Latinx	NH/PI	Two or more	Unknown	US Non-Resident	White
Number of ABC enrollments (A through C-) in . . .									
KPI 5.1 No Cost course sections (\$0)									
KPI 5.2 Low Cost course sections (<\$50)									
KPI 5.3 Traditional Cost course sections (>\$50)									
KPI 5.4 Unknown Cost course sections (\$?)									
Number of DFW enrollments in . . .									
KPI 5.5 No Cost course sections (\$0)									
KPI 5.6 Low Cost course sections (<\$50)									
KPI 5.7 Traditional Cost course sections (>\$50)									
KPI 5.8 Unknown Cost course sections (\$?)									
Number of Incomplete enrollments in . . .									
KPI 5.9 No Cost course sections (\$0)									
KPI 5.10 Low Cost course sections (<\$50)									
KPI 5.11 Traditional Cost course sections (>\$50)									
KPI 5.12 Unknown Cost course sections (\$?)									

Table 2. Data Reported by Pell Status



Data Check! Student enrollments in the Pell Status (Eligible) table should equal the number of student enrollments reported in KPI 3.

	Enrollments by Pell Status (Eligible)		
	Pell Eligible	Non-Pell Eligible	Unknown Pell Eligible
Number of ABC enrollments (A through C-) in . . .			
KPI 5.1 No Cost course sections (\$0)			
KPI 5.2 Low Cost course sections (<\$50)			
KPI 5.3 Traditional Cost course sections (>\$50)			
KPI 5.4 Unknown Cost course sections (\$?)			
Number of DFW enrollments in . . .			
KPI 5.5 No Cost course sections (\$0)			
KPI 5.6 Low Cost course sections (<\$50)			
KPI 5.7 Traditional Cost course sections (>\$50)			
KPI 5.8 Unknown Cost course sections (\$?)			
Number of Incomplete enrollments in . . .			
KPI 5.9 No Cost course sections (\$0)			
KPI 5.10 Low Cost course sections (<\$50)			
KPI 5.11 Traditional Cost course sections (>\$50)			
KPI 5.12 Unknown Cost course sections (\$?)			

Table 3. Data Reported by Pell Status



Data Check! Student enrollments in the Gender table should equal the number of student enrollments reported in KPI 3.

	Enrollments by Gender			
	Female	Male	Another Gender	Unknown Gender
Number of ABC enrollments (A through C-) in . .				

KPI 5.1 No Cost course sections (\$0)				
KPI 5.2 Low Cost course sections (<\$50)				
KPI 5.3 Traditional Cost course sections (>\$50)				
KPI 5.4 Unknown Cost Course sections (\$?)				
Number of DFW enrollments in . . .				
KPI 5.5 No Cost course sections (\$0)				
KPI 5.6 Low Cost course sections (<\$50)				
KPI 5.7 Traditional Cost course sections (>\$50)				
KPI 5.8 Unknown Cost Course sections (\$?)				
Number of Incomplete enrollments in . . .				
KPI 5.9 No Cost course sections (\$0)				
KPI 5.10 Low Cost course sections (<\$50)				
KPI 5.11 Traditional Cost course sections (>\$50)				
KPI 5.12 Unknown Cost Course sections (\$?)				

DATA TO REPORT TO THE STATE.

See tables above for how data should be reported to the State.

KPI 6: Utilization of No/ Low Cost course sections by key demographic groups.

NOTE: As of June 2024, KPI 6 was consolidated with KPI 5. KPI 6 is discontinued.

KPI 7: Survey of Student Experiences Using Course Materials

Reporting Requirements: The student survey will begin in AY2025 and be done every 3 years.

Information Needed for Student Surveys

- List of student emails
- Student survey instrument - Student Experiences Using Course Materials

Timing

1. Surveys will be done every 3 years during the fall semester beginning in Fall 2024.
2. Each institution's IR office will distribute the student survey for a 3 week period between mid-October and December.

Process

1. Survey results will go directly to the DHE OER Assessment Committee and DHE Research & Planning Division.
2. DHE Research & Planning will provide each institution with their results.
3. DHE OER Assessment Committee will report data in the aggregate - either for all institutions or by segment (i.e., community colleges, state universities, and the UMass system). Individual data by institution will not be publicly reported by DHE.

An Exemplar of MA Colleges and Institutions

Fitchburg State University, Fitchburg, MA (Currently has no course markings)

Type: Undergraduate and Graduate University

Student Information System: Banner

Registration System: Web4

Bookstore: eCampus

Has Course Marking been Instituted? No

Key Partners: Institutional Research, Registrar, Bookstore

Contact Person: Connie Strittmatter

Process for Collection of KPIs:

Fitchburg State University has developed the following processes to identify No Cost (\$0) Low Cost (<\$50) Traditional Cost (\$>\$50) and Unknown Cost (\$?)

Two documents are used for this process:

1. Fitchburg State's Institutional Research team creates a spreadsheet of course sections offered during a given term.
2. eCampus bookstore textbook list.

Spreadsheet from Institutional Research

This data is pulled from Banner. The spreadsheet includes the following information (an example of each field is included):

- CRN: 12345
- Subj: ENGLNumber: 1100
- Section: 01
- Title: Writing I
- Instructor Last: Railton
- Instructor First: Ben
- Dept: English
- Campus (Day or GCE): Day
- Actual Enrollment: 18
- Modality: Hybrid

Spreadsheet from eCampus Bookstore

The Fitchburg State bookstore (eCampus) provided the team with a spreadsheet of textbook adoptions for a given semester. To determine whether a course was No Cost, Low Cost or Unknown Cost, we use the lowest available material price regardless of whether it was new, used, rental, or digital copies (as indicated in the course marking guide). The eCampus spreadsheet is sorted to remove graduate course materials.

Data Collection Process

The team compiling the bookstore data adds 3 columns to the Institutional Research spreadsheet for data collection and note-taking:

Column A: # of books - we use this column if a course has more than one required textbook. It isn't needed for reporting to the state but we like to have this data.

Column B: No/Low/Unknown/Traditional - We use this column to indicate whether course materials in this section are

- No Cost (coded as \$0),
- Low Cost which is between \$0.01-\$50 (coded as low),
- Traditional Cost - over \$50 (coded as Traditional).
- Unknown Cost - used when cost of course materials cannot be determined (coded as Unknown)

Column C: Comments - We use this column for note-taking. Notes can include if course materials are recommended (tagged as \$0 per course marking guide), if course materials are Low Cost only if they purchase a digital rental (versus buying new or used). This data isn't needed for reporting to the state, but we like to track this data for our own purposes.

We open both spreadsheets and make sure both sheets are sorted alphabetically by Course Number and section. The team manually reviews the bookstore spreadsheet to identify if a textbook is considered No Cost (\$0), Low Cost (<\$50), Unknown Cost (\$?) or Traditional Cost (>\$50) and adds that information to the Institutional Repository spreadsheet. The review takes approximately 5-6 hours.

Once we have a completed spreadsheet, we will have all of the data needed to report on KPIs 1-3. We compile the data needed and send it to the Institutional Research department for review. IR then reports the data to the State.

For KPI 5, we send the completed spreadsheet to the Institutional Research Team to get student demographic data (race, ethnicity and Pell grant recipient) and final grades for all students enrolled in all classes. Through a series of Excel pivot tables, Institutional Research should be able to report on the data needed for KPI 5.

Continuing Challenges: We recognize that this is an imperfect process. Specifically, we are concerned with the faculty who don't report their course materials to the bookstore. We struggle to balance 100%

accuracy versus pragmatism and what is realistically feasible. We hope to refine this process as we explore implementing course markings.

What if you do not have the partnerships and technical skills to do this work? If you are not able to obtain bookstore data you could do a faculty survey. You could provide the faculty with the course information and ask them to select 1 of the items from a drop-down menu: No Cost/Low Cost/Unknown Cost/Traditional Cost

To make it as easy as possible for faculty, it would be helpful to have Institutional Research or Registrar run a report of courses offered during the semester and maintain a spreadsheet. You may have a lower response rate, but you would have at least some data to report.

Please contact Connie Strittmatter at cstrittm@fichburgstate.edu if you would like to see samples of our spreadsheets.

Appendices

Appendix A: Letter (7/27/2021) from Carlos E. Santiago, Commissioner, MA DHE Re: OER Course Marking Implementation and OER Key Performance Indicators



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Carlos E. Santiago, *Commissioner*
Chris Gabrieli, *Chairman*
Massachusetts Board of Higher Education

MEMORANDUM

TO: Community College Presidents
State University Presidents
Martin Meehan, President, University of Massachusetts System

FR: Carlos E. Santiago, Commissioner

CC: P. Marshall, Deputy Commissioner for Academic Affairs & Student Success
R. Awkward, Assistant Commissioner for Academic Effectiveness

RE: **OER Course Marking Implementation and OER Key Performance Indicators**

DATE: July 27, 2021

Background

As you recall, I circulated the draft *OER (Open Educational Resources) Course Marking Implementation Guidelines* and OER Key Performance Indicators (KPIs) to you for your institutional review and input before they were presented to the Board of Higher Education at the June meeting. I received feedback from a representative sample of institutions, including two community colleges, three state universities and one UMass campus. All six institutions expressed their support for this initiative, and commented on the quality of the guidelines and the usefulness of the KPIs. A few offered additional recommendations that were considered and incorporated as appropriate.

The Board unanimously approved the motion from the Academic Affairs Committee to accept the guidelines and the KPIs and directed me to work with the OER Advisory Council and with each of you to implement course marking across the public higher education system. The Board views providing students information that will enable them to make choices that reduce their cost of attending higher education, provides faculty additional teaching and learning tools, and increases students' likelihood of persistence and completion - especially for our minoritized students - as totally in alignment with our Equity Agenda.

The Request

Therefore, if you have not already done so, I am writing to request that you begin the effort of implementing course marking at your institution for your students using the *OER Course Marking Implementation Guidelines*. Ten Massachusetts public institutions have already enacted course marking. In fact, their experiences along with information from other states strongly influenced the development of the guidelines. In addition, the Board has asked me to report to them next year on progress in the area of implementing course marking and KPIs at our public institutions.

As a reminder, OER Key Performance Indicators (KPIs) are comprised of six measures of effectiveness of OER at our institutions. The ability of your institution to track and report on this data will be significantly enhanced by implementing course marking. The OER Advisory Council understood that course marking might not be fully implemented in AY2022. However, the KPIs should be implemented in AY2022, and the ones that were chosen are ones they believe they can still manually track and report. Studies suggest that investment in OER provides an enormous return on investment for invested public dollars. Accordingly, we need to systematically track and report on how well the OER initiative is progressing in order to continue to increase its utilization and to demonstrate why it is deserving of additional funding support.

I recognize this implementation will require varying levels of effort for each institution. The guidelines strongly encourage each institution to create an Implementation Committee composed of key stakeholders at your campus as the first step. Further, each of you have a representative on the OER Advisory Council who overwhelmingly supported the implementation of course marking and KPIs. The OER Advisory Council will be meeting to determine other ways they can help institutions to implement course marking. In addition, your OER representative should be the lead person at your institution to help guide this important initiative.

Closing

I know that I can count on each of you to implement this important equity initiative. I am hopeful that institutions who have yet to implement course marking will be able to complete the process of doing so during the academic year 2021-2022.

To assist your efforts, I have directed Deputy Commissioner Patricia A. Marshall and Assistant Commissioner Robert Awkward to work with the OER Advisory Council and with each of you to implement course marking and the OER Key Performance Indicators. If you have any questions, please

feel free to contact Dr. Marshall at pmarshall@dhe.mass.edu and Dr. Awkward at rawkward@dhe.mass.edu.

Thank you for your continued support of this important statewide initiative.

Attachment A: [*OER Course Marking Implementation Guidelines*](#)

Attachment B: [*OER Key Performance Indicators*](#)

Appendix B: Letter (9/1/21) from Bob Awkward to MA OER Advisory Council Re: OER Key Performance Indicators

MEMORANDUM

Attachment B

TO: OER Advisory Council

FR: Bob Awkward

CC: M. Billings, P. Marshall, S. Tashjian

RE: OER Key Performance Indicators

DATE: September 1, 2020 (revised June 8, 2021)

Background

The confluence of COVID-19, faculty needing high quality teaching and learning resources to do online instruction, and students continuing to demand no/low-cost academic textbooks and ancillaries creates a unique opportunity. For many of you, this has been a labor of love moving this needle forward for far too long. Yet, continuing fiscal pressures will also require us – and everyone – to demonstrate return on public investment.

With this background in mind, the OER Steering Committee took on the effort to identify some key performance indicators (KPIs) that each institution and the state as a whole could use to measure the impact of our efforts. After conducting research as to what other states (e.g., Rhode Island and Minnesota), other institutions (e.g., University of Wisconsin-Madison and Salem State University), and other organizations (e.g., UNESCO and the 2012 Paris OER Declaration) have done, we discovered a framework that came up in several places that is popularly called COUP.

The COUP Framework was the original Open Education Group’s approach to studying the impact of open educational resources (like open textbooks) and open pedagogy in secondary and post-secondary education. COUP stands for:

- Cost
- Outcomes
- Usage
- Perceptions

After much consideration as to the many different ways that OER value could be measured, we decided that it would make the most sense to keep it simple for this first year. As we get better at capturing the data necessary to conduct more sophisticated measurements through Course Marking implementation, we will begin to implement those. Thus, we recommend the following to the OER Advisory Council for action for AY2021.

Here is the proposal from the OER Steering Committee for the OER Key Performance Indicators that we believe were the most direct measures we could all capture and that would clearly demonstrate the value that OER is having at our institutions.

This was adopted by the OER Advisory Council at its November 16, 2020 meeting.

KEY PERFORMANCE INDICATORS: COUP FRAMEWORK

- Cost
 - Total costs savings
- Outcomes:
 - Total no. of OER courses/sections as a percentage of total courses/sections
 - No. of students enrolled in OER courses as a percentage of total enrollment
 - Changes in DFW rates in OER vs. Non-OER courses
 - Demographics of students taking OER courses vs. total students
- Usage:
 - No. of faculty, staff, students participating in OER activities on campus

Appendix C: Letter (11/23/2021) from Patricia Marshall,
Deputy Commissioner for Academic Affairs & Student
Success, MA DHE Re: Implementing OER Course Markings
and Key Performance Indicators



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Carlos E. Santiago
Commissioner
Chris Gabrieli
Board Chairman

MEMORANDUM

TO: Community College Chief Academic Officers

State University Chief Academic Officers

Dr. Katherine Newman, University of Massachusetts System

FR: Patricia A. Marshall, Deputy Commissioner for Academic Affairs & Student Success

CC: R. Awkward

RE: **Implementing OER Course Marking & Key Performance Indicators**

DATE: November 23, 2021

Background

I am writing to follow up on Commissioner Santiago's memorandum dated July 26 informing you that the Board of Higher Education (BHE) had voted to receive the *OER Course Marking Implementation Guide* and to direct the Commissioner to work with the institutions of public higher education to

implement this initiative. This occurred, in part, because of the value of increasing the utilization of open educational resources (OER), the quality of the report that was developed, and the institutional feedback received providing overwhelming support for course marking and the OER Key Performance Indicators (KPIs). In addition, the Commissioner is to report on our progress at the June 2022 BHE meeting.

The OER Advisory Council members representing the 29 public institutions of higher education are quite aware of the challenges ahead, including time, effort, and resource allocation. As a result, they have considered how they and the Department of Higher Education (DHE) can help. Their first recommendation involves the critical role that you as academic leaders play in articulating the importance of implementing this initiative at your institution. The research is quite clear that course marking cannot be successfully implemented if there is not strong and consistent academic leadership. The second recommendation is that everyone who will be involved with this effort would benefit from reading the *OER Course Marking Implementation Guide* that outlines:

- the rationale for implementing course marking
 - steps to implement course marking
 - definitions of terms
 - best practices that were informed by the institutions that have already implemented this initiative in Massachusetts as well as in other states

I hope that you are able to share the attached implementation guide widely with your campus community, particularly with key stakeholders who are advancing this work.

Moving Forward

We also recognize that each of your institutions have unique cultures, are at different points on the course marking implementation continuum, and will need to implement these recommendations differently based on local factors. In order to advance this work on your campus, you may consider establishing an OER task force and inviting key players (e.g., faculty, faculty union representative, librarian, student, administration, IT, registrar, bookstore manager, and your OER Advisory Council

representative) to provide their input and expertise. You might also consider charging the OER task force with the following activities:

- conducting surveys of OER users on your campus as to their awareness and needs
- using the survey results, the *Implementation Guide*, and feedback from the OER task force to identify what is needed to implement course marking
- presenting this information to the relevant governance committee so they may have a more informed discussion
- gaining the support of faculty governance

On many of our public campuses the creation of an OER task force has helped to build the infrastructure necessary to implement course marking and to gain the support of all key constituencies in advancing this work.

In addition to the recommendations outlined above, we would like to offer a series of Zoom sessions designed to provide functional leaders on your campuses with the information they need to successfully advance the recommendations in the *OER Course Marking Implementation Guide*. These sessions will be led by staff from institutions that have already implemented course marking and will be designed for Institutional Research, the Registrar, the Bookstore Manager, Information Technology, and the OER Advisory Council representative. Once the sessions have been scheduled, I am hoping you might consider sharing the invitations with the appropriate members of your campus community.

OER Key Performance Indicators

At the June 2021 BHE meeting, the Board also adopted six OER Key Performance Indicators (KPIs) that are to be implemented this academic year. These KPIs will allow us to be more systematic in tracking and reporting on the impact of OER, including:

- cost savings for students
- outcomes (i.e., the number of OER vs. non-OER courses/sections, the number of students enrolled in OER vs. non-OER courses/sections, changes in DFW rates, and the demographics of the students)
- usage (i.e., the number of faculty, staff and students participating in OER activities on your campuses)

After additional discussion, the OER Advisory Council (through its OER Course Flagging Committee), has come to realize that until course marking is fully implemented, we may need to scale back the number of performance measures institutions can implement in AY2022 from six to four, as much of this will be performed manually. Once course marking is implemented, it will be much easier to electronically aggregate and report on this data.

In addition, the OER Advisory Council is currently developing a detailed implementation guide to facilitate the enactment of the OER Key Performance Indicators. I will provide you with more information about this in a subsequent communication.

Closing

I hope these suggestions and offers of assistance are helpful and will enable you to begin the process of implementing the recommendations in the *OER Course Marking Implementation Guide*. If you have any questions related to the content of this memo, please do not hesitate to contact me at pmarshall@dhe.mass.edu or Dr. Awkward at rawkward@dhe.mass.edu. As always, thank you for your ongoing support of this important initiative.

Attachment: *OER Course Marking Implementation Guide*