2017
Educator Preparation Institution (EPI) Performance Score

Calculation Guide

A Step-by-Step Guide for How EPI Performance Scores are Calculated

Contents

Appendix:
How Each Performance
Measure Is Calculated 15

WHAT IS THE EPI PERFORMANCE SCORE?

Pursuant to Title II of the Higher Education Act, the Michigan Department of Education (MDE), in collaboration with educator preparation programs, has designed, developed and now administers a system for determining **Educator Preparation Institution (EPI) Performance Scores.** The purpose of the EPI Performance Score system is to identify, assist, and report teacher preparation programs which are not performing at a satisfactory level.

The EPI Performance Score observes and measures EPI performance relative to three goals aligned to the Michigan Interstate Teacher Assessment and Support Consortium Standards (MI-InTASC). These are: **1) Effective classroom teaching** through demonstration of content knowledge and methods/pedagogy; **2) Continuous improvement** pursuant to MDE priorities; and support of **3) Educator effectiveness** ratings.

CALCULATION PROCEDURES AND THE CORRECTIVE ACTION SYSTEM

The information presented in the remainder of this publication will illustrate how:

- the performance goals discussed above are measured;
- measures of these performance goals (EPI Performance Score calculation component values) are determined and factored into the calculation steps;
- the calculation steps and procedures are used to determine final EPI Performance Scores and Performance Levels; and
- the Progressive Corrective Action System functions to assist non-satisfactory programs.

Additionally, the Appendix details the methods used to determine the values for each of the performance goal components.

Calculation Steps:

EPI SCORE CALCULATION COMPONENTS

To observe and measure the three performance goals discussed in the previous section, the EPI Performance scoring system employs three score components that use data from three sources:

1) the Michigan Test for Teacher Certification (MTTC)
2) Surveys of teacher candidates and candidate supervisors (Surveys); and
3) Educator Effectiveness (Ed. Eff.) ratings.

There are five steps to calculating each EPI Performance Score and ultimately determining a Performance Level and a Corrective Action Phase. The table below uses random examples of EPI score component values to illustrate the first three steps of the calculation process (factoring in the three data sources discussed above). The information that follows Table 1 details all five steps.

Table 1: EPI Score Calculation Steps 1-3: Factoring in the Score Components

Process	Function	Examples		
Step 1	**Determine Performance Goal Measures**	**Goal 1 Measure:** (MTTC) Michigan Test for Teacher Certification Score = 88.3	**Goal 2 Measure:** Teacher Candidates and Candidate Supervisor Surveys = 97.0	**Goal 3 Measure:** Educator Effectiveness Ratings = 83.3
Step 2	**Determine Performance Goal Rating Factors (as calculated from Performance Goal Measures)**	**Goal 1 Rating Factor:** 70% of MTTC (61.80) **+** 30% of Surveys (29.1) = 90.9	**Goal 2 Rating Factor:** 100% of Surveys (97.0) = 97.0	**Goal 3 Rating Factor:** 100% of Ed. Eff. Ratings (83.3) = 83.3
Step 3	**Compute Weighting Determinant (as a quotient of two Control Factors)**	**Control Factor 1:** Number of Effectiveness Ratings Received = 50		
		Control Factor 2: Number of Completers = 81		
		Weighting Determinant: Number of Ratings Received (50) ÷ Number of Completers (81) = 62%		

STEP 1: DETERMINE PERFORMANCE GOAL MEASURE SCORES

Data is gathered and calculated to determine a score for each Performance Goal Measure: MTTC, Survey and Educator Effectiveness Ratings. (The detailed methods for calculating each Performance Measure are explained in the Appendix.) Those Performance Goal Measure components are then used to determine the Goal Rating Factors used in further calculations, as described in Step 2.

STEP 2: DETERMINE THE RATING FACTORS

■ Goal 1 Rating Factor uses a sum of 70% of the MTTC score and 30% of the Survey score as shown in this example:

$$
\begin{array}{llllllll}
\text{(MTTC score)} & 88.30 & \times & .70 & = & 61.81 & \rightarrow & 61.81 \\
\text{(Surveys score)} & 97.00 & \times & .30 & = & 29.10 & \rightarrow & +\ 29.10 \\
\end{array}
$$

Goal 1 Rating Factor = 90.91

■ Goal 2 Rating Factor uses 100% of the Survey Score:

$$
\text{(Surveys score)} \quad 97.00 \times 1.00 = 97.0 \rightarrow \textbf{Goal 2 Rating Factor = 97.0}
$$

■ Goal 3 Rating Factor uses 100% of the Educator Effectiveness Ratings Score:

$$
\text{(Educator Effectiveness Ratings score)} \quad 83.30 \times 1.00 = 83.3 \rightarrow \textbf{Goal 3 Rating Factor = 83.3}
$$

STEP 3: COMPUTE THE WEIGHTING DETERMINANT

The EPI Performance Score calculation procedure also employs a Control Factor by computing a Weighting Determinant. The Weighting Determinant assigns a Weight Category to each EPI. The determined Weight Category defines a unique Weighted Multiplier for each Rating Factor, as shown in Table 2.

Table 2: Variable Weight Schedule

Weighting Determinant Range	Weight Category	Goal 1 Rating Factor Weighted Multiplier	Goal 2 Rating Factor Weighted Multiplier	Goal 3 Rating Factor Weighted Multiplier
1% – 10%	1	.70	.30	.0
11% – 20%	2	.63	.27	.10
21% – 30%	3	.56	.24	.20
31% or more	4	.50	.20	.30

The Weighting Determinant equals the Number of Educational Effectiveness Ratings Received divided by the Number of Completers:

(Ed. Eff. Ratings Received) 50 ÷ (Number of Completers) 81 = .62   →   **Weighting Determinant = 62%**

In the above example, a program with a calculated Weighting Determinant of 62% falls into **Category 4**, for which the Goal Rating Factor Weighted Multipliers are .50, .20, and .30 respectively.

STEP 4: APPLY THE WEIGHTED MULTIPLIERS TO THE RATING FACTORS

As explained in Step 3, the Weight Category defines a unique Weighted Multiplier for each Goal Rating Factor.

The next step in the EPI Score calculation procedure is to apply these Weighted Multipliers:

(Goal 1 Rating Factor) 90.9 x (Category 4 Multiplier) .50 = 45.5 **(Weighted Goal 1 Factor)**

(Goal 2 Rating Factor) 97.0 x (Category 4 Multiplier) .20 = 19.4 **(Weighted Goal 2 Factor)**

(Goal 3 Rating Factor) 83.3 x (Category 4 Multiplier) .30 = 25.0 **(Weighted Goal 3 Factor)**

STEP 5: CALCULATE FINAL EPI PERFORMANCE SCORE

The final EPI Performance Score is the sum of the three Weighted Rating Factor products from Step 4:

(Weighted Goal 1 Factor)	→	45.5
(Weighted Goal 2 Factor)	→	19.4
(Weighted Goal 3 Factor)	→	+ 25.0

(Final EPI Performance Score) =   89.9

STEP 6: COMPARE THE FINAL EPI PERFORMANCE SCORE TO THE CUT SCORE TO DETERMINE THE PERFORMANCE LEVEL AND CORRECTIVE ACTION PHASE

In the last step, the final EPI Performance Score — 89.9 — is compared to the cut score of 84.5:

The **EPI score exceeded the cut score:**   (Final EPI Score)   **89.9 > 84.5**   (Cut Score)

Based upon the EPI Performance Score comparison to the Cut Score, a determination of the appropriate Performance Level and Corrective Action Phase is made in context of the Progressive Corrective Action System, as described in the next section.

Progressive Corrective Action System:

The Progressive Corrective Action System consists of three Performance Levels and seven Corrective Action Phases, as illustrated in Table 3.

The determination of whether or not an EPI has met the Cut Score each year, in relation to their historical performance, places the EPI into one of three **Performance Levels: 1) "Satisfactory"; 2) "At Risk of Low Performing"; and 3) "Low Performing";** and in one of the seven **Corrective Action Phases: "0-6."**

Each year, upon meeting or not meeting the cut score, the EPI Phase number may increase or decrease by one step, depending on the Phase assigned the previous year and the Performance change (progression or regression) in the current year, as described in Table 3.

Table 3. EPI Performance Levels, Corrective Action Phases and Goals

Performance Level	Corrective Action Phases	EPI Goals
Satisfactory	0	Maintain this Performance Level, while seeking opportunities to improve.
	1	Meet cut score next year to get to Phase 0.
At Risk of Low Performing	2	Meet cut score for next 2 years in a row to reach Phase 0.
	3	Meet cut score for next 3 years in a row to reach Phase 0.
Low Performing	4	Meet cut score for next 4 years in a row to reach Phase 0.
	5	Meet cut score for next 5 years in a row to reach Phase 0.
	6	Meet cut score for next 6 years in a row to reach Phase 0.

For example, an EPI that was **"At Risk, 2"** in the previous year, then meets or exceeds the Cut Score in the current year, will progress to **"Satisfactory, 1."** If the same EPI meets or exceeds the Cut Score the next year, the program would progress to **"Corrective Action Phase, 0."** Alternately, if the same EPI misses the Cut Score in the next year, it would regress to **"At Risk, 2."** (Once at **"Phase 0"**, an EPI cannot improve numerically.)

Table 4 describes in detail the characteristics of each Performance Level and the specific consequences of each Corrective Action Phase:

Table 4. Performance Level Characteristics and Corrective Actions

Performance Level Characteristics	Corrective Actions
Satisfactory • high pass rate on MTTC content-based assessments • teacher candidates report a high level of program efficacy regarding their teacher preparation program, and clinical experiences • supervising faculty rate teacher candidates' preparation postively • graduates almost exclusively earn "Effective" or "Highly Effective" ratings over the most recent three-year period	**0 –** No corrective actions required. EPI collaborates with the MDE; pursues continuous quality improvement and may serve as a model. **1 –** Awarded conditionally, the year following the first year after which no corrective action was required. Minimal corrective action required.
At Risk • low pass rate on MTTC content-based assessments • teacher candidates report a low level of program efficacy regarding their teacher preparation program, including clinical experiences • supervising faculty rate teacher candidates' preparation negatively • graduates almost exclusively earn "Ineffective" or "Minimally Effective" effectiveness ratings over a three-year period	**2 –** Intensive corrective action may be required. EPI collaborates with the MDE to design, develop and implement a corrective action plan. **3 –** Intensive corrective action required. EPI collaborates with the MDE to design, develop, and implement a corrective action plan.

Performance Level Characteristics	Corrective Actions
Low Performing • low pass rate on MTTC content-based assessments • teacher candidates report a low level of program efficacy regarding their teacher preparation, including clinical experiences • supervising faculty consistently rate teacher candidates' preparation negatively • graduates almost exclusively earn "Ineffective" or "Minimally Effective" effectiveness ratings over a three-year period	**4, 5, & 6 –** Critical corrective action required at program and institution levels. EPI collaborates with the MDE and other resource to design and develop goal-specific rapid improvement plans. May necessitate assignment of an external committee of scholars. May result in closure of individual programs. May result in withdrawal of institutional approval.

Appendix:
How Each Performance Measure Is Calculated

EPI SCORE CALCULATION COMPONENTS

1. Michigan Test for Teacher Certification (MTTC) Score
2. Teacher Candidate Survey and Candidate Supervisor Survey Scores
3. Educator Effectiveness Ratings

MTTC

The MTTC is administered by the Evaluation Systems Group of Pearson, Inc. The MTTC contribution to the EPI Performance Score is the test takers' best attempt, also known as the Cumulative Pass Percentage. The Pass Percentage is calculated by dividing the cumulative number of content/subject area tests passed (after a failed first attempt) by the total number of initial attempts made within a 36-month period (specifically, between August and July 36 months later, e.g., August 2014 – July 2017). Test takers may attempt a test an unlimited number of times. This system accounts for data variability, which occurs year after year.

NOTE: three-year cumulative test data for subject area programs closed in consultation with the MDE as a result of corrective action activities in the academic year for which the score is calculated are removed from score calculation.

The basic skills examination component of the MTTC – e.g., professional readiness examination (PRE) or its alternative pass measures – is not included in the EPI performance score calculation.

Table 5, below, is an example of MTTC Pass Percentage Calculation.

Table 5: Example MTTC Pass Percentage Calculation

Content Tests	Number of Initial Attempts	Number of Initial Tests Passed	Percent of Initial Tests Passed	Cumulative Number of Tests Passed	Cumulative % of Tests Passed
002 English	8	7	87.5	7	87.5
004 Speech	3	3	100.0	3	100.0
009 History	2	1	50.0	1	50.0

Content Tests	Number of Initial Attempts	Number of Initial Tests Passed	Percent of Initial Tests Passed	Cumulative Number of Tests Passed	Cumulative % of Tests Passed
010 Political Science	1	0	0	0	0
011 Psychology	1	1	100.0	1	100.0
017 Biology	2	0	0	2	100.0
022 Mathematics (Secondary)	3	2	66.7	3	100.0
023 French	1	1	100.0	1	100.0
028 Spanish	4	4	100.0	4	100.0
043 Health	11	8	72.7	10	90.9
044 Physical Education	13	8	61.5	10	76.9
084 Social Studies (Secondary)	6	1	16.7	4	66.7
089 Mathematics (Elementary)	5	4	80.0	5	100.0
090 Language Arts (Elementary)	11	9	81.8	10	90.9
093 Integrated Science (Elementary)	4	2	50.0	4	100.0
094 Integrated Science (Secondary)	2	2	100.0	2	100.0
095 Visual Arts Education	5	4	80.0	4	80.0
099 Music Education	14	13	92.9	13	92.9
103 Elementary Education	21	16	76.2	19	90.5
106 Early Child Ed (Gen & SPED)	3	3	100.0	3	100.0
All Tests (excluding PRE)	120	89	74.2	106	**88.3**

As illustrated in the example, the MTTC Pass percentage is calculated by dividing the cumulative number of tests passed by the number of initial attempts:

(cumulative tests passed) 106 / (number of initial attempts) 120 = **(Pass Percentage) 88.3**

This Pass Percentage, 88.3, is the MTTC component of the EPI Performance Score calculation.

SURVEYS

The survey component of the EPI Performance Score calculation includes data collected twice a year (spring and fall) from Teacher Candidates (TC), who evaluate their experiences in the teacher preparation programs, and from Candidate Supervisors (CS) at each EPI, who work with and directly supervise the clinical experiences of teacher candidates.

The TC and CS surveys are designed, developed, and administered by the MDE. The survey items in both surveys align with MI-InTASC's *"Model Core Teaching Standards and Learning Progression for Teachers 1.0."* The Teacher Candidate survey is composed of 31 Likert-type items (scaled 1-4), and distributed across eight categories. The Candidate Supervisor survey is composed 28 Likert-type items (scaled 1-5), and distributed across seven categories.

Survey scores are combined to create efficacy scores per item, then category, and then per survey. Efficacy is defined as the percentage of "Strongly Agree" and "Somewhat Agree" responses.

The overall Survey Efficacy Score is the average of efficacy from the four surveys administered in the year, and represents the overall percentage of positive responses on the Likert scale across all Items and Categories, in both sets of surveys (TC or CS).

This Overall Survey Efficacy Score is the Survey component of the EPI Performance Score calculation.

EDUCATOR EFFECTIVENESS RATINGS

Data provided by K-12 administrators is collected through the Registry of Education Personnel (REP) and the Michigan Online Educator Certification System (MOECS). This data is provided to the MDE by the Center for Educational Performance and Information (CEPI). The Educator Effectiveness Rating system uses data from the most recent three years of teaching, within the most recent five-year span since first hire with valid certification.

To determine the overall Educator Effectiveness Rating used as the EPI Performance Score component, the data counts are processed as explained here:

1) The effectiveness level **data counts** are converted to **percentages** of the overall count.

2) The **category percentages** are each then converted to a **point value**, using a graded system designed to account for continuous improvement of teaching practices, and to ensure that all classrooms have effective teachers through ongoing professional development, even when teachers are receiving the highest scores.

3) The **point value** for each category is also **weighted based on teaching experience**, to flatten the higher learning curve for newer educators. The MDE recognizes factors outside the control of an EPI may account for differing teacher performance over time and unweighted values would give these factors too much influence over this component score. Thus, a Weighting Component is applied to the effectiveness point values, which is based on educator years of experience. As teachers in their first year may face a steep learning curve, performance in this year receives a slightly lower weight (0.3) than given to more experienced teachers. Similarly, teachers in their third year of experience may have learned significantly from their experience rather than from their EPI, so performance in this year receives a still lower weight of 0.2. Performance in the second year of experience receives the remaining 0.5.

Three years of tabulated Effectiveness Ratings (the three most recent years of teaching within the most recent five-year span) are then totaled, to arrive at a final Ed. Eff. Score. See Tables 6a-6c.

Table 6a. Educator Effectiveness Score Tabulation for Year 1 of Teaching

Tabulations for First Year of Teaching Experience	Ineffective (0 Point Value)	Minimally Effective (0.3 Point Value)	Effective (0.8 Point Value)	Highly Effective (1.1 Point Value in Year 1 of Teaching)	Totals
Count	1	15	207	60	283
Percent of Total Ratings	.00	.05	.73	.22	100
Rating Level Point Value	0	1.5	58.4	24.2	84.1
Final Weighted Value **(by a factor of .3 for one year of experience)**	0	.45	17.52	7.26	**25.23**

Table 6b. Educator Effectiveness Score Tabulation for Year 2 of Teaching

Tabulations for Second Year of Teaching Experience	Ineffective (0 Point Value)	Minimally Effective (0.3 Point Value)	Effective (0.8 Point Value)	Highly Effective (1 Point Value after Year 1 of Teaching)	Totals
Count	0	9	105	41	155
Percent of Total Ratings	.00	.06	.68	.26	100
Rating Level Point Value	0	1.8	54.40	26.0	82.2
Final Weighted Value **(by a factor of .5 for two years of experience)**	0	.90	27.20	13	**41.10**

Table 6c. Educator Effectiveness Score Tabulation for Year 3 (and no more than five years) of Teaching

Tabulations for Third Year of Teaching Experience	Ineffective (0 Point Value)	Minimally Effective (0.3 Point Value)	Effective (0.8 Point Value)	Highly Effective (1 Point Value after Year 1 of Teaching)	Totals
Count	1	3	48	21	73
Percent of Total Ratings	.01	.04	.66	.29	100
Rating Level Point Value	0	1.2	54.80	29.0	85.0
Final Weighted Value **(by a factor of .2 for three years of experience)**	0	.24	10.96	5.8	**17.00**

The final Educator Effectiveness Score is the sum of the Ed. Eff. Scores for 3 years of teaching:

(Year 1 Ed. Eff. Score) 25.23 + (Year 2 Ed. Eff. Score) 41.10 + (Year 3 Ed. Eff. Score) 17.00 = **(Overall Educator Effectiveness Rating) 83.33**

This overall rating, 83.33, is the Educator Effectiveness Rating component of the EPI Performance Score Calculation.

NOTE: In cases where an EPI has teachers who are missing ratings used in the tabulation formula, the "years-of-experience" weights are scaled proportionately to add up to 1.0 (one). Some possible illustrative scenarios are presented in Table 7, below.

Table 7: Examples of Alternate Effectiveness Rating Weights

Examples	Rates and Weights	Years		
A	Available Rates	Year 1: Yes	Year 2: Yes	Year 3: Yes
A	Assigned Weights	.3000	.5000	.2000
B	Available Rates	Year 1: Yes	Year 2: Yes	Year 3: No
B	Assigned Weights	.3750	.6250	.0000
C	Available Rates	Year 1: Yes	Year 2: No	Year 3: Yes
C	Assigned Weights	.6000	.0000	.2857
D	Available Rates	Year 1: No	Year 2: Yes	Year 3: Yes
D	Assigned Weights	.000	.7143	.2857
E	Available Rates	Year 1: Yes	Year 2: No	Year 3: No
E	Assigned Weights	1.0000	.0000	.0000
F	Available Rates	Year 1: No	Year 2: Yes	Year 3: No
F	Assigned Weights	.0000	1.000	.0000
G	Available Rates	Year 1: No	Year 2: No	Year 3: Yes
G	Assigned Weights	.0000	.0000	1.000