
Opportunity to Learn and Equity: Measuring Effort in STEM*

**Science, Technology, Engineering and
Mathematics*

Lighthouse Evaluation



Opportunity to Learn and Equity: What Gets Measured, Gets Done

- **We** can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us.
- **We** already know more than we need to do that.
- **Whether** or not we do it must finally depend on how we feel about the fact that we haven't so far.

- RON EDMONDS

Lighthouse Evaluation



What is “Opportunity to Learn”?

“Opportunity to Learn” (OTL) is a way of measuring and reporting whether students and teachers have access to the different ingredients that make up quality schools. The more OTL ingredients that are present in an individual school, school district, or even in schools across the state, the more opportunities students have to benefit from a high quality education.

Equity and Opportunity to Learn

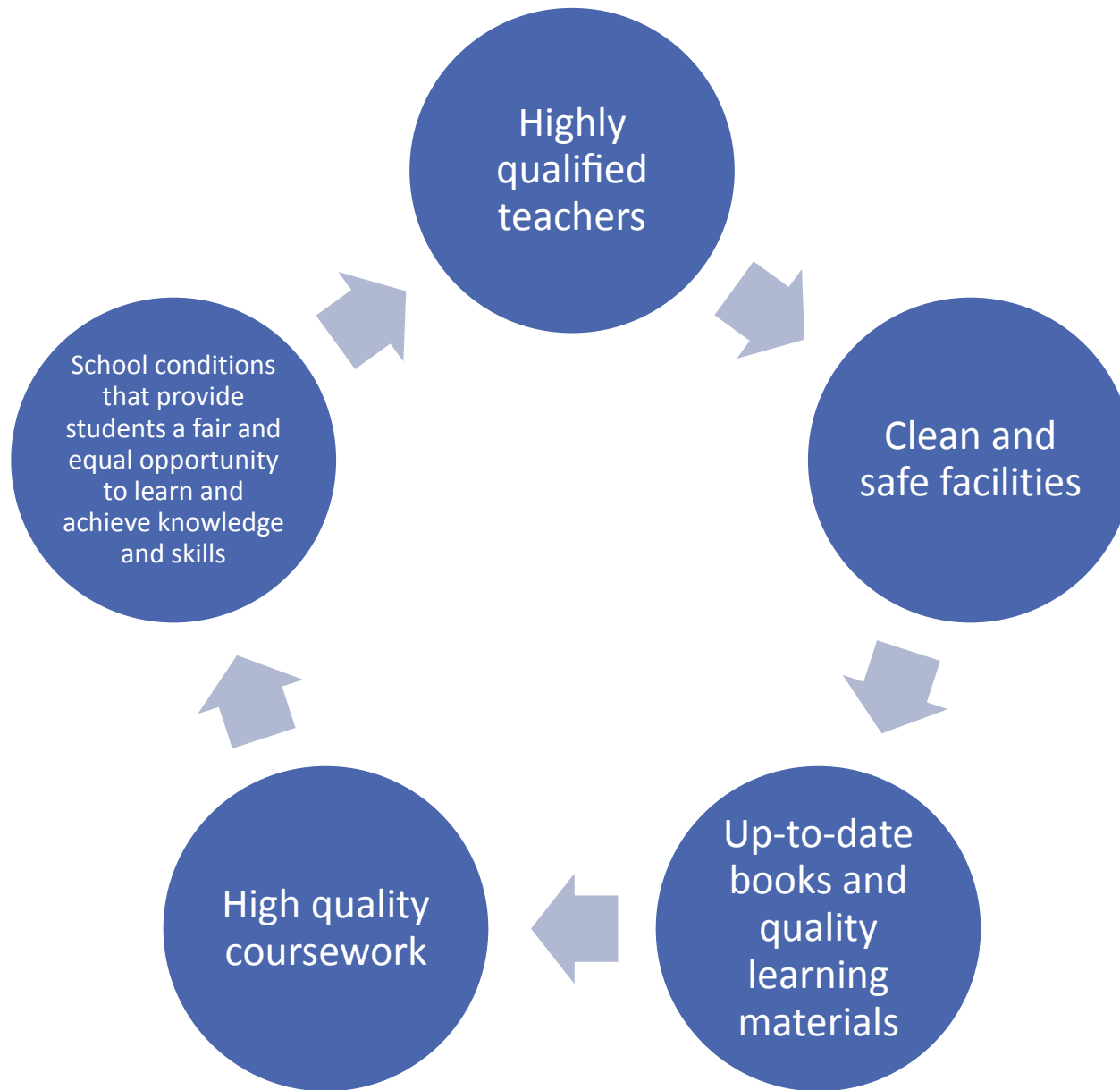
Since 1968 the Elementary and Secondary School Civil Rights Compliance Report (known as the E&S survey) has been used to gather information about possible disparities in access to learning opportunities and violations of students' civil rights. Thirty-five years after the initiation of the E&S survey, large disparities remain both in educational outcomes and in access to learning opportunities and resources.

Source: Measuring Access to Learning Opportunities
<http://www.nap.edu/catalog/10673.html>

Vermont Measured OTL in 2003-2006

- ❖ 46 Questions about Opportunity to Learn were asked of every student who completed the state NECAP assessments in grades 4, 8 and 10.
- ❖ Data were compiled by the Department of Education and released to Governor Dean at his request.
- ❖ Overall results suggested that:
 - Parents of low income children attended fewer parent-teacher conferences.
 - Low income children had less access to computers than other children.
 - Low income children were less likely to keep math or reading portfolios than other children.
 - Low income children were less positive about the school climate they experienced than other children (especially in more urban areas).

Some examples of OTL



Remember.....



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If Student Level Results of the OTL measures
are not reported in disaggregated form by SES, Gender,
Disability and Ethnicity
We May Never Know If Equity Supports
Learning for All Students

Opportunities to Learn, Measures and Examples

Opportunity to Learn	Measure(s)	Example(s)
Enrollment in high level subject matter classes	Courses taken by each student Student Questionnaire	Student Course Taking Files (SCT) My (math, science, reading) course is preparing me for the next course I will take in ----.
Time to learn subjects	Student Questionnaire	My (subject) courses are filled with tasks, lessons and learning.
Learning Materials	Student Questionnaire	I have all the access to the Internet that I need to do my work in school.
Teaching Quality (Current)	Student Questionnaire	My teachers really know the (subjects) I am taking with them this year.

Opportunities to Learn, Measures and Examples

Opportunity to Learn	Measure(s)	Example(s)
Labs, hands-on learning, personal learning plans	Student Questionnaire	My learning in my courses involves projects, hands-on learning and working with others ___% of my time in school.
High Expectations for All Students	Student Questionnaire	My teachers expect that I can learn everything that they are teaching me.
Safe and Orderly Environment	Student Questionnaire	I feel safe in this school. My teachers respect me as a student and as a person.
Teacher Quality	<p>Teacher recruiting history, salary differentials among districts and schools.</p> <p>Assignment of teachers to courses and sections of students.</p>	<p>School level data of salary and benefits offered and in place for teachers.</p> <p>Teacher assignments disaggregated by the proportion of each group of students.</p>

Sample Questions:

Student Opportunity to Learn Mathematics and Science Questionnaire

Please Circle your choice below each question:

1. My current (math) course is preparing me for the next course in math I will take next year.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

2. When I arrive at math class we usually get started on our work within...

5 Minutes	10 Minutes	20 Minutes	40 Minutes
4	3	2	1

3. I usually come to class with my homework completed from the last class..

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

4. When I think about what happens in my (math) class I am usually working on a class project....

50% of the Time	30% of the Time	10% of the Time	None of the Time
4	3	2	1

5. My teacher in math believes that I can learn the math we are studying.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

6. When my teacher is teaching new math lessons I understand what he/she is teaching....

All of the Time	Half of the Time	25% of the Time	None of the Time
4	3	2	1

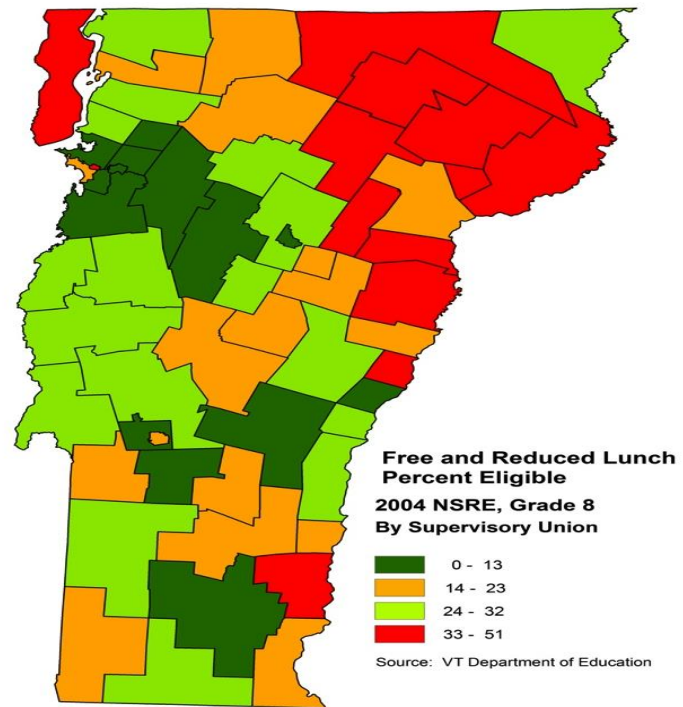
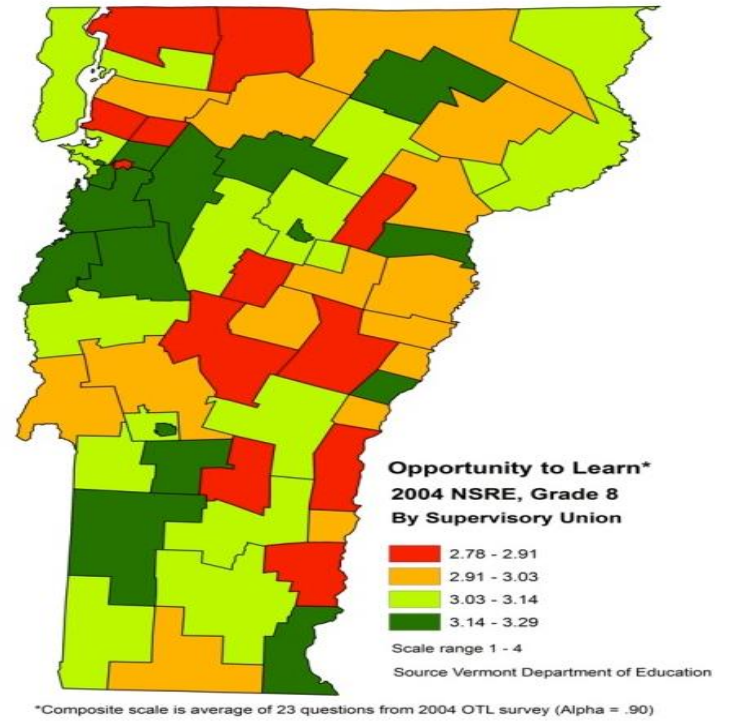
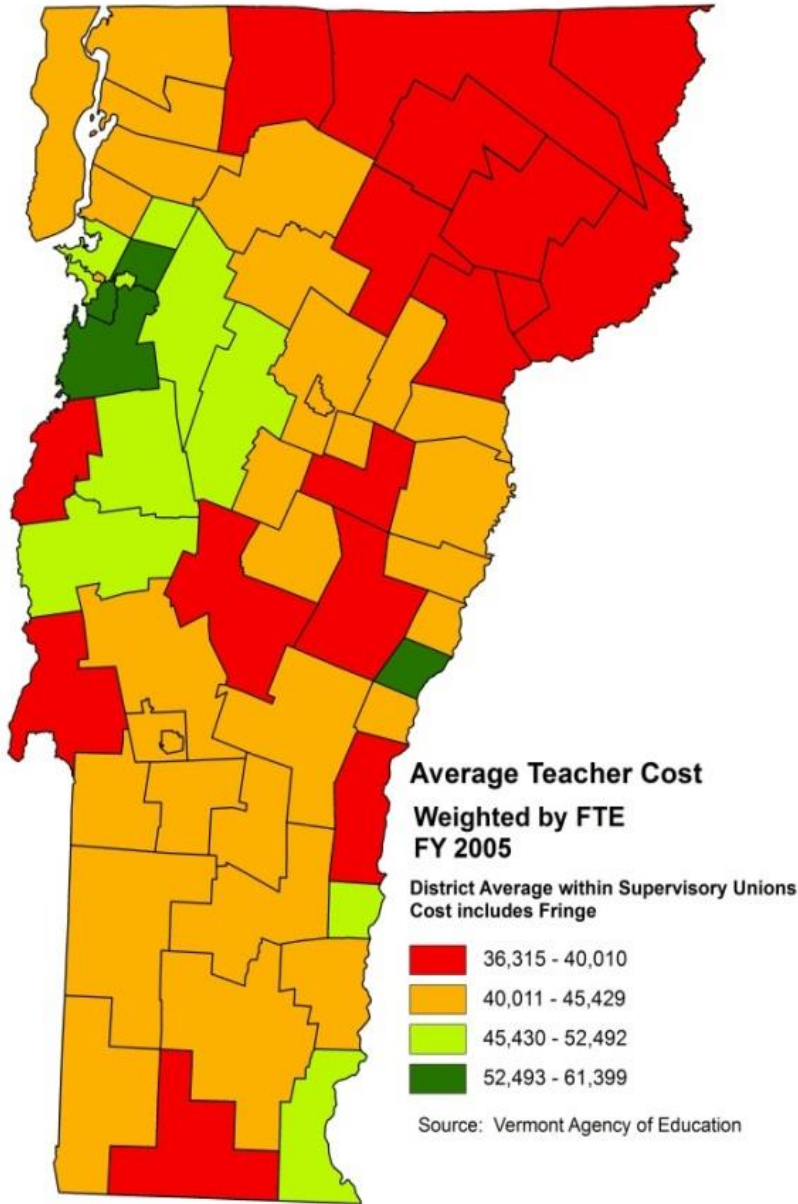
7. When I need to use a computer to work on a class project I can use one right away.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

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Will Vermont Again Measure OTL?



Lighthouse Evaluation



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