



2023-24 99b Legislative Report
Office of Systems, Evaluation, & Technology

July 30, 2024

Pursuant to MCL 388.1699b, subsection 5, in the State School Aid Act, the Michigan Department of Education (MDE), Educational Technology unit, awarded funds through a competitive grant only for districts to develop and implement teacher professional development programs for computer science courses and content that will reach new and existing teachers with little to no computer science background.

The NexSys application for the competitive grant opened in January 2024 and 59 districts were awarded funds by the end of May 2024. This report shows progress from May 2024 through June 2024. Through carryover, districts will have the 2024-25 school year to use funds to prepare their educators for computer science education implementation.

As stated in legislation:

a. The number of teachers prepared by June 30, 2024:

44	Elementary*
21	Middle School*
17	High School*
82	Total number of teachers prepared*

b. The number of students reached, including the number and percentage of students reached, disaggregated by gender, race, ethnicity, and socioeconomic status:

	Male *		Female *		Economically Disadvantaged *	
Group	1,814		1,665		2,683	
American Indian or Alaska Native	<10	<3%	<10	<3%	<10	<3%
Asian	98	5.40%	89	5.35%	85	3.17%
African American	231	12.73%	216	12.97%	332	12.37%
Hispanic/Latino	265	14.61%	246	14.78%	421	15.69%
Native Hawaiian or Other Pacific Islander	<10	<3%	<10	<3%	<10	<3%
Two or More Races	85	4.69%	76	4.57%	117	4.36%
White	1,126	62.07%	1,032	61.98%	1,716	63.96%

**This aggregate data reflects the 7 of 59 awarded districts that offered professional learning to staff prior to June 30, 2024. The student impact prior to this date is low due to grant timelines and awarding of funds. All 59 districts have professional learning planned for the fall of 2024 that will reach a wider spectrum of students in the classroom. The percentages are calculated based on the number of students reached by trained teachers divided by the total population of the seven districts where the trained teachers work.*

c. The number and percentage of students with passing AP exam scores for high school AP courses, by gender, race, and ethnicity, once that data is available:

AP exam score data was not available at the time of initial collection for the 2023-24 school year as reported by districts.

d. The number of teachers that started implementing computer science compared to the number of prepared teachers that attended professional learning:

Prior to June 30, 2024, 0 teachers began implementing. Based on the timing of the awarded funds, 82 educators from 7 districts attended professional learning opportunities and will start implementation in fall 2024. Training and implementation in the remaining 52 districts will also happen in fall 2024.

e. The number of elementary students who are provided integrated computer science opportunities:

Prior to June 30, 2024, 0 (see above explanation).

f. Progress in building a systematic K to 12 computer science plan using the SCRIPT rubric:

43	districts have completed the SCRIPT workshop
13	districts have scheduled a SCRIPT workshop
3	districts have not yet scheduled a SCRIPT workshop

g. Any agreements to provide pre- and post-assessments of teacher readiness for teaching computational thinking and computer science and any data related to those assessments:

38	districts have agreements in place for pre- and post-assessments of teacher readiness
18	districts do not yet have an agreement in place for pre- and post-assessment of teacher readiness
3	districts will not have an agreement as they have chosen a tool that does not require an agreement for pre- and post-assessment of teacher readiness

Any questions regarding this report can be sent to the Office of Systems, Evaluation, and Technology, at MDE_EdTech@michigan.gov.

Appendix A: Pre-assessment teacher readiness data collected as of June 30, 2024. The data includes information from 9 districts.

The TRAACT™ (Teacher Readiness to Adopt and Adapt Computational Thinking) survey, developed by Project Tomorrow, evaluates teachers’ preparedness for integrating computational thinking into their classrooms. It offers a snapshot score that can be tailored to personalize professional development and track progress over time when utilized alongside the TRAACT Spectrum. This research-based tool, stemming from a Project Tomorrow National Science Foundation grant, evaluates not just teachers’ competencies but also their attitudes toward computational thinking and digital learning. It offers valuable insights to coaches and leaders regarding teachers’ confidence levels and their potential for sustained changes in instructional methods. This was the tool most used by districts awarded the 99b grant.

Beginner			Intermediate			Advanced		
A1	33	10%	V3	20	6%	C1	2	1%
A2	17	5%	M1	11	3%	C2	0	0%
V1	56	17%	M2	11	3%	C3	1	0%
V2	170	51%	M3	9	3%	R1	1	0%
			M4	0	0%	R2	0	0%
Total	276	83%	Total	51	15%	Total	4	1%

		Levels of Use			
		Incremental	Intentional	Impact	Innovation
S t a g e s o f C o n c e r n	Awareness	(A1) Teachers have limited awareness of CT and thus do not highly value the importance of CT skills for students. Teachers’ use of technology within instruction is incremental (not fully integrated). This may be due to underdeveloped technology skills. 33	(A2) Teachers have a higher awareness of CT concepts, practices and principles but without effective implementation have not developed a value proposition yet. Technology skills are stronger, and the use of digital resources shows greater intentionality. 17		
	Valuation	(V1) Though still limited in awareness of CT, teachers show greater interest in the value of CT skill development. Leveraging that value proposition results in more CT class activities but efforts are sporadic, single content area focused and technology challenges limit effectiveness 56	(V2) Teachers place a higher value on CT skill development combined with a higher valuation on the use of digital tools in the classroom. But despite good intentions supported by strong value propositions, the CT class activities are still less sophisticated and may indicate a need for more advanced skill development 170	(V3) Propelled by advanced technology skills, teachers demonstrate a strong valuation on CT as important for students’ future. Teachers have a higher CT competency also and demonstrate that they know how to impact student learning through the integration of CT concepts, practices and principles within the curriculum. 20	
	Management	(M1) Teachers have average to high CT awareness and tech skills coupled with a higher-than-average value proposition for CT. They are experimenting with more CT activities in the class. Teachers’ concerns do not reflect CT integration in the classroom. 11	(M2) Teachers integrate CT regularly and the CT activities in the classroom indicate more sophisticated usage. However, their concerns focus on operational or structural considerations such as time spent organizing, managing, and scheduling CT activities. 11	(M3) Teachers’ skills and valuations on technology usage and CT skill development are all high. Correspondingly, CT class activities include a few higher impact activities that support student skill development. Concerns reflect a mix of operational vs. instructive issues. 9	(M4) Teachers are integrating CT concepts, practices and principles expertly, but are concerned that the “fit” between the resources they are using and their students’ needs might be imperfect. Accordingly, they are looking at ways to efficiently adapt materials to best fit the differentiated needs of their students. 0
	Collaboration		(C1) Teachers integrate CT regularly and are more often experimenting with new tools, but lack skills and knowledge to create collaborative, student centered learning experiences using CT tools. 2	(C2) Teachers use CT resources to create learner-centered environments that support collaboration, but frequency of those experiences is limited. Teachers’ concerns are still focused on primarily operational issues. 0	(C3) Teachers actively restructure/re-engineer their curriculum to integrate CT with increased emphasis on student collaborations and teacher professional learning collaborations using CT resources. 1
	Refocusing			(R1) Teachers are effectively using CT resources to create learner-centered, collaborative environments that impact student skill development. But teachers lack clarity on how to connect students’ learning, CT strategies and the vision or mission of the school. 1	(R2) Demonstrating high content, high computing integration, teachers adapt curriculum/practices based upon feedback and assessments and create their own CT assets as support. Teachers can accurately articulate the alignment of their CT practices to school objectives. 0

The following graphs are district demographics of TRAACT participants.



